

SAF-RC-190
100N Field Remediation – Soil In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21

KW 5/11/11
INITIAL/DATE



COMMENTS:

SDG J01076

SAF-RC-190

Rad only

Chem only

Rad & Chem

Complete

Partial

Sample Location: 128-N-1 Excavation

Analytical Data Package Prepared For
Washington Closure Hanford



Radiochemical Analysis By
TestAmerica

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Assigned Laboratory Code: TARL

Data Package Contains 25 Pages

Report No.: 46341

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
J01076	RC-190	J1H221	J1D130553-1	MG0M51AA	9MG0M510	1104148
		J1H222	J1D130553-2	MG0NA1AA	9MG0NA10	1104148
		J1H223	J1D130553-3	MG0NC1AA	9MG0NC10	1104148
		J1H224	J1D130553-4	MG0ND1AA	9MG0ND10	1104148
		J1H225	J1D130553-5	MG0NE1AA	9MG0NE10	1104148

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

April 26, 2011

Attention: Joan Kessner

SAF Number	:	RC-190
Date SDG Closed	:	April 13, 2011
Number of Samples	:	Five (5)
Sample Type	:	Soil
SDG Number	:	J01076
Data Deliverable	:	21-Day / Summary

CASE NARRATIVE

I. Introduction

On April 13, 2011 five soil samples were received at TestAmerica for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

<u>WCH ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J1H221	MG0M5	SOIL	4/13/11
J1H222	MG0NA	SOIL	4/13/11
J1H223	MG0NC	SOIL	4/13/11
J1H224	MG0ND	SOIL	4/13/11
J1H225	MG0NE	SOIL	4/13/11

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analysis was:

Washington Closure Hanford
April 26, 2011

Gamma Spectroscopy
Gamma Spec by method RL-GAM-001

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

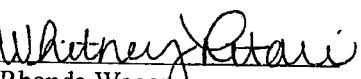
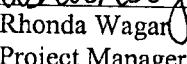
Gamma Spectroscopy

Gamma Spec by method RL-GAM-001:

The CRDL was not met on some analytes due to reduced count time. The count time was reduced to meet the priority turn around time. Except as noted, the LCS, batch blank, samples and sample duplicate (J1H221) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:


for 
Rhonda Wagar
Project Manager

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, $R = \text{constants} * f(x,y,z,...)$. The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/\sqrt{n}), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) <i>u_c... Combined Uncertainty.</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c the combined uncertainty</i> . The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \sqrt{2 * (\text{BkgrndCnt/BkgrndCntMin}) / SCntMin}) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \sqrt{((\text{BkgrndCnt/BkgrndCntMin}) / SCntMin) + 2.71 / SCntMin}) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number .
RER	The equation Replicate Error Ratio = $(S-D)/[\sqrt{(TPUs^2 + TPUs^2)}]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUs is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

Date: 26-Apr-11

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 46341

SDG No: J01076

Client Id Batch	Work Order	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1104148 GAMMA_GS									
J1H221									
MG0M51AA	AMERICIUM 241		-8.60E-03 +/- 6.4E-02	U	pCi/g		1.10E-01		
	CO-60		-7.72E-03 +/- 6.3E-02	U	pCi/g		1.12E-01	5.00E-02	
	CS-137		2.18E-02 +/- 5.9E-02	U	pCi/g		1.07E-01	1.00E-01	
	EU-152		-1.21E-02 +/- 1.6E-01	U	pCi/g		2.54E-01	1.00E-01	
	EU-154		2.46E-03 +/- 1.7E-01	U	pCi/g		3.12E-01	1.00E-01	
	EU-155		9.31E-03 +/- 1.1E-01	U	pCi/g		1.80E-01	1.00E-01	
	RA-226		3.84E-01 +/- 2.2E-01	U	pCi/g		3.14E-01		
J1H221 DUP									
MG0M51AC	AMERICIUM 241		9.90E-02 +/- 1.6E-01	U	pCi/g		2.85E-01		238.1
	CO-60		2.35E-02 +/- 3.7E-02	U	pCi/g		7.31E-02	5.00E-02	395.8
	CS-137		2.60E-02 +/- 3.5E-02	U	pCi/g		6.45E-02	1.00E-01	17.6
	EU-152		1.35E-02 +/- 6.9E-02	U	pCi/g		1.22E-01	1.00E-01	3790.3
	EU-154		-2.08E-02 +/- 1.2E-01	U	pCi/g		2.04E-01	1.00E-01	-253.7
	EU-155		-1.52E-02 +/- 6.7E-02	U	pCi/g		1.15E-01	1.00E-01	-835.1
	RA-226		4.71E-01 +/- 1.4E-01	U	pCi/g		1.97E-01		20.5
J1H222									
MG0NA1AA	AMERICIUM 241		2.41E-04 +/- 8.6E-02	U	pCi/g		1.46E-01		
	CO-60		-1.73E-02 +/- 8.7E-02	U	pCi/g		1.54E-01	5.00E-02	
	CS-137		-4.89E-02 +/- 7.7E-02	U	pCi/g		1.27E-01	1.00E-01	
	EU-152		-8.73E-02 +/- 1.9E-01	U	pCi/g		3.00E-01	1.00E-01	
	EU-154		7.15E-02 +/- 2.2E-01	U	pCi/g		4.16E-01	1.00E-01	
	EU-155		-3.36E-02 +/- 1.3E-01	U	pCi/g		2.21E-01	1.00E-01	
	RA-226		1.05E+00 +/- 3.0E-01		pCi/g		2.21E-01		
J1H223									
MG0NC1AA	AMERICIUM 241		8.14E-03 +/- 1.2E-01	U	pCi/g		2.02E-01		
	CO-60		-1.36E-02 +/- 5.0E-02	U	pCi/g		8.84E-02	5.00E-02	
	CS-137		-1.96E-02 +/- 4.8E-02	U	pCi/g		8.09E-02	1.00E-01	
	EU-152		7.64E-02 +/- 1.3E-01	U	pCi/g		2.30E-01	1.00E-01	
	EU-154		3.61E-02 +/- 1.7E-01	U	pCi/g		3.09E-01	1.00E-01	
	EU-155		7.57E-02 +/- 1.0E-01	U	pCi/g		1.86E-01	1.00E-01	
	RA-226		4.84E-01 +/- 1.9E-01	U	pCi/g		2.86E-01		
J1H224									
MG0ND1AA	AMERICIUM 241		-6.24E-02 +/- 1.8E-01	U	pCi/g		3.01E-01		
	CO-60		-1.75E-03 +/- 4.0E-02	U	pCi/g		7.32E-02	5.00E-02	
	CS-137		3.30E-02 +/- 3.6E-02	U	pCi/g		6.85E-02	1.00E-01	
	EU-152		-1.10E-02 +/- 7.9E-02	U	pCi/g		1.35E-01	1.00E-01	
	EU-154		3.28E-02 +/- 1.2E-01	U	pCi/g		2.29E-01	1.00E-01	

TestAmerica RPD - Relative Percent Difference.
 rptSTLRchSaSum U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdi, Total Uncert, CRDL, RDL or
 mary2 V5.2.12 not identified by gamma scan software.
 A2002

Sample Results Summary**Date:** 26-Apr-11**TestAmerica TARL**

Ordered by Method, Batch No., Client Sample ID.

Report No. : 46341**SDG No:** J01076

Client Id Batch	Work Order	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1104148 GAMMA_GS									
J1H224									
MG0ND1AA	EU-155		-8.89E-03 +/- 7.6E-02	U	pCi/g		1.30E-01	1.00E-01	
	RA-226		4.63E-01 +/- 1.9E-01	U	pCi/g		2.32E-01		
J1H225									
MG0NE1AA	AMERICIUM 241		-6.00E-02 +/- 7.0E-02	U	pCi/g		1.15E-01		
	CO-60		-3.28E-03 +/- 6.0E-02	U	pCi/g		1.10E-01	5.00E-02	
	CS-137		4.22E-04 +/- 6.0E-02	U	pCi/g		1.04E-01	1.00E-01	
	EU-152		7.38E-03 +/- 1.5E-01	U	pCi/g		2.58E-01	1.00E-01	
	EU-154		6.88E-02 +/- 1.7E-01	U	pCi/g		3.18E-01	1.00E-01	
	EU-155		-4.44E-02 +/- 1.1E-01	U	pCi/g		1.78E-01	1.00E-01	
	RA-226		5.24E-01 +/- 2.1E-01	U	pCi/g		3.11E-01		

No. of Results: 42

TestAmerica RPD - Relative Percent Difference.
rptSTLRchSaSum U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or
mary2 V5.2.12 not identified by gamma scan software.
A2002

QC Results Summary

Date: 26-Apr-11

TestAmerica TARL

Ordered by Method, Batch No., QC Type,.

Report No. : 46341**SDG No.: J01076**

Batch	Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
GAMMA GS									
1104148	BLANK QC,								
	MG0921AA	AMERICIUM 241	-4.07E-02 +- 9.7E-02	U	pCi/g				1.63E-01
		CO-60	3.42E-02 +- 4.8E-02	U	pCi/g				9.71E-02
		CS-137	-1.37E-02 +- 4.8E-02	U	pCi/g				8.21E-02
		EU-152	8.18E-02 +- 1.1E-01	U	pCi/g				2.05E-01
		EU-154	7.75E-02 +- 1.3E-01	U	pCi/g				2.57E-01
		EU-155	3.56E-02 +- 8.5E-02	U	pCi/g				1.53E-01
		RA-226	3.99E-02 +- 2.1E-01	U	pCi/g				2.24E-01
1104148	LCS,								
	MG0921AC	AMERICIUM 241	4.09E+01 +- 5.0E+00		pCi/g	102%	0.0	7.34E-01	
		CO-60	1.93E+01 +- 2.4E+00		pCi/g	99%	0.0	1.17E-01	
		CS-137	4.35E+01 +- 5.9E+00		pCi/g	99%	0.0	1.35E-01	

No. of Results: 10

TestAmerica	Bias	- (Result/Expected)-1 as defined by ANSI N13.30.
rptSTLRchQcSum mary V5.2.12 A2002	U Qual	- Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM I
SAMPLE RESULTS

Date: 26-Apr-11

Lab Name: TestAmerica
 Lot-Sample No.: J1D130553-1
 Client Sample ID: J1H221

Parameter	Result	Count	Total	MDC MDA,	Rpt Unit,	Yield	Rst/MDC,	Analysis,	Total Sa	Aliquot	Primary
		Qual	Error (2 s)	Action Lev	Lc	CRDL(RL)	Rst/TotUncert	Prep Date	Size	Size	Detector
Batch: 1104148	GAMMA_GS			Work Order: MG0M51AA		Report DB ID: 9MG0M510					
AMERICIUM 241	-8.60E-03 U	6.4E-02	6.4E-02	1.10E-01	pCi/g		-0.08	4/21/11 11:22 p		52.6	GER14\$1
CO-60	-7.72E-03 U	6.3E-02	6.3E-02	1.12E-01	pCi/g		-0.27	4/21/11 11:22 p		9	GER14\$1
CS-137	2.18E-02 U	5.9E-02	5.9E-02	1.07E-01	pCi/g		5.00E-02	4/21/11 11:22 p		52.6	GER14\$1
⑨ EU-152	-1.21E-02 U	1.6E-01	1.6E-01	2.54E-01	pCi/g		1.00E-01	4/21/11 11:22 p		52.6	GER14\$1
EU-154	2.46E-03 U	1.7E-01	1.7E-01	3.12E-01	pCi/g		1.00E-01	4/21/11 11:22 p		52.6	GER14\$1
EU-155	9.31E-03 U	1.1E-01	1.1E-01	1.80E-01	pCi/g		1.00E-01	4/21/11 11:22 p		52.6	GER14\$1
RA-226	3.84E-01 U	2.2E-01	2.2E-01	3.14E-01	pCi/g		(1.2)	4/21/11 11:22 p		52.6	GER14\$1
							(3.6)			9	
No. of Results:	7	Comments:									

FORM I
SAMPLE RESULTS

TestAmerica Laboratories, Inc.

Date: 26-Apr-11

Lab Name: TestAmerica
 Lot-Sample No.: J1D130553-2
 Client Sample ID: J1H2222

Parameter	Result	Qual	Count	Total	Uncert(2 s)	Action Lev	MDC MDA,	Rpt Unit,	Yield	Rst/MDC,	Analysis,	Total Sa	Aliquot	Primary
							CRDL(RL)	CRDL(RL)		Rst/TotUcert	Prep Date	Size	Size	Detector
Batch: 104148 GAMMA_GS Work Order: MG0NA1AA Report DB ID: 9MG0NA10														
AMERICIUM 241	2.41E-04	U	8.6E-02	8.6E-02		1.46E-01	pCi/g		0.		4/22/11 03:17 a		43.4	GER14\$1
CO-60	-1.73E-02	U	8.7E-02	8.7E-02		1.54E-01	pCi/g		0.01		4/22/11 03:17 a		g	GER14\$1
CS-137	-4.89E-02	U	7.7E-02	7.7E-02		1.27E-01	pCi/g		-0.11		4/22/11 03:17 a		43.4	GER14\$1
10 EU-152	-8.73E-02	U	1.9E-01	1.9E-01		3.00E-01	pCi/g		5.00E-02		4/22/11 03:17 a		43.4	GER14\$1
EU-154	7.15E-02	U	2.2E-01	2.2E-01		4.16E-01	pCi/g		1.00E-01		4/22/11 03:17 a		43.4	GER14\$1
EU-155	-3.36E-02	U	1.3E-01	1.3E-01		2.21E-01	pCi/g		0.15		4/22/11 03:17 a		43.4	GER14\$1
RA-226	1.05E+00		3.0E-01	3.0E-01		2.21E-01	pCi/g		1.00E-01		(4.7)		43.4	GER14\$1
No. of Results: 7 Comments:														
(7.)														

TestAmerica MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRctSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdi, Total Uncrt, CRDL, RDL or not identified by gamma scan software.
 V5.2.12 A2002

FORM I
SAMPLE RESULTS

Date: 26-Apr-11

Lab Name: TestAmerica
 Lot-Sample No.: J1D130553-3
 Client Sample ID: J1H223

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL) Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1104148 GAMMA_GS Work Order: MG0NC1AA Report DB ID: 9MG0NC10											
AMERICIUM 241	8.14E-03	U	1.2E-01	1.2E-01	2.02E-01	pCi/g		0.04	4/22/11 03:18 a		54.0 GER7\$1
CO-60	-1.36E-02	U	5.0E-02	5.0E-02	8.84E-02	pCi/g		0.14	4/22/11 03:18 a		9 GER7\$1
CS-137	-1.96E-02	U	4.8E-02	4.8E-02	8.09E-02	pCi/g		5.00E-02	4/22/11 03:18 a		54.0 GER7\$1
EU-152	7.64E-02	U	1.3E-01	1.3E-01	2.30E-01	pCi/g		1.00E-01	4/22/11 03:18 a		9 GER7\$1
EU-154	3.61E-02	U	1.7E-01	1.7E-01	3.09E-01	pCi/g		1.00E-01	(1.2) 4/22/11 03:18 a		54.0 GER7\$1
EU-155	7.57E-02	U	1.0E-01	1.0E-01	1.86E-01	pCi/g		1.00E-01	4/22/11 03:18 a		9 GER7\$1
RA-226	4.84E-01	U	1.9E-01	1.9E-01	2.86E-01	pCi/g		1.00E-01	(1.7) 4/22/11 03:18 a		54.0 GER7\$1
No. of Results: 7 Comments:											

FORM I
SAMPLE RESULTS

Date: 26-Apr-11

Lab Name: TestAmerica
 Lot-Sample No.: J1D130553-4
 Client Sample ID: J1H224

SDG: J01076
 Report No.: 46341
 COC No.: RC-190-045

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector	Ordered by Client Sample ID, Batch No.	
													Work Order:	Report DB ID:
Batch: 1104148	GAMMA_GS				MGOND1AA									9MGOND10
AMERICIUM 241	-6.24E-02	U	1.8E-01	1.8E-01	3.01E-01	pCi/g				-0.21			4/22/11 06:44 a	46.9
CO-60	-1.75E-03	U	4.0E-02	4.0E-02	7.32E-02	pCi/g				-0.69			4/22/11 06:44 a	g
CS-137	3.30E-02	U	3.6E-02	3.6E-02	6.85E-02	pCi/g				-0.02			4/22/11 06:44 a	46.9
12	EU-152	-1.10E-02	U	7.9E-02	7.9E-02	1.35E-01	pCi/g			-0.09			4/22/11 06:44 a	g
EU-154	3.28E-02	U	1.2E-01	1.2E-01	2.29E-01	pCi/g				0.48			4/22/11 06:44 a	46.9
EU-155	-8.89E-03	U	7.6E-02	7.6E-02	1.30E-01	pCi/g				1.00E-01	(1.8)		4/22/11 06:44 a	g
RA-226	4.63E-01	U	1.9E-01	1.9E-01	2.32E-01	pCi/g				-0.07			4/22/11 06:44 a	46.9
	No. of Results:	7	Comments:											g

FORM I
SAMPLE RESULTS

Date: 26-Apr-11

Lab Name: TestAmerica
 Lot-Sample No.: J1D130553-5
 Client Sample ID: J1H225

Parameter	Result	Qual	Count	Total	MDC MDA,	Rpt Unit,	Yield	Rst/NDC,	Analysis,	Total Sa	Aliquot	Primary
			Error (2 s)	Uncert(2 s)	Action Lev	Lc	CRDL(RL)	Rst/TotUncrt	Prep Date	Size	Size	Detector
Batch: 1104148 GAMMA_GS Work Order: MGONE1AA Report DB ID: 9MG0NE10												
AMERICIUM 241	-6.00E-02	U	7.0E-02	7.0E-02	1.15E-01	pCi/g		-0.52	4/22/11 06:44 a		53.2	GER14\$1
CO-60	-3.28E-03	U	6.0E-02	6.0E-02	1.10E-01	pCi/g		(-1.7)			g	
CS-137	4.22E-04	U	6.0E-02	6.0E-02	1.04E-01	pCi/g	5.00E-02	-0.03	4/22/11 06:44 a		53.2	GER14\$1
EU-152	7.38E-03	U	1.5E-01	1.5E-01	2.58E-01	pCi/g		1.00E-01	0.01	4/22/11 06:44 a		9
EU-154	6.88E-02	U	1.7E-01	1.7E-01	3.18E-01	pCi/g		1.00E-01	0.1	4/22/11 06:44 a		53.2
EU-155	-4.44E-02	U	1.1E-01	1.1E-01	1.78E-01	pCi/g		1.00E-01	0.22	4/22/11 06:44 a		53.2
RA-226	5.24E-01	U	2.1E-01	2.1E-01	3.11E-01	pCi/g		0.83	0.83	4/22/11 06:44 a		9
								1.00E-01	-0.25	4/22/11 06:44 a		53.2
								1.00E-01	-0.82	4/22/11 06:44 a		9
								(1.7)	(1.7)	4/22/11 06:44 a		53.2
								(5.)	(5.)			g
No. of Results: 7 Comments:												

TestAmerica MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 RptSTLRchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc|Mdai|Mdi, Total Uncert, CRDL, RDL or not identified by gamma scan software.
 V5.2.12 A2002

FORM I
SAMPLE RESULTS

Date: 26-Apr-11

Lab Name: TestAmerica
 Lot-Sample No.: J1D130553-5
 Client Sample ID: J1H225

SDG:	J01076	Collection Date:	4/12/2011 9:40:00 AM						
Report No. :	46341	Received Date:	4/13/2011 12:30:00 PM						
COC No. :	RC-190-045	Matrix:	SOIL						
Ordered by Client Sample ID, Batch No.									
Parameter	Result	Count	Total MDC MDA,	Rpt Unit,	Yield	Analysis,	Total Sa	Aliquot	Primary
	Qual	Error (2 s)	Uncert(2 s)	Action Lev	Lc	Rs MDC, Rst/Tot Ucert	Prep Date	Size	Detector
Parameter	Result	Count	Total MDC MDA,	Rpt Unit,	Yield	Analysis,	Total Sa	Aliquot	Primary
	Qual	Error (2 s)	Uncert(2 s)	Action Lev	Lc	Rs MDC, Rst/Tot Ucert	Prep Date	Size	Detector

FORM II

Date: 26-Apr-11

DUPLICATE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J1D130553-1
 Client Sample ID: J1H221 DUP

SDG: J01076
 Report No.: 46341
 COC No.: RC-190-045
 Matrix: SOIL

Parameter	Result, Orig Rst	Count Error(2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUncrt	Analysis, Prep Date	Orig Sa DB ID: MG0M51CR	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1104148 GAMMA_GS												
AMERICIUM 241	9.90E-02	U	1.6E-01	1.6E-01	2.85E-01	pCi/g	0.35	4/22/11 03:17 a		52.5	GER11\$1	
CO-60	-8.60E-03	U	RPD 238.1				(1.2)			9		
	2.35E-02	U	3.7E-02	3.7E-02	7.31E-02	pCi/g	0.32	4/22/11 03:17 a		52.5	GER11\$1	
CS-137	-7.72E-03	U	RPD 395.8				5.00E-02			9		
	2.60E-02	U	3.5E-02	3.5E-02	6.45E-02	pCi/g	0.4	4/22/11 03:17 a		52.5	GER11\$1	
EU-152	2.18E-02	U	RPD 17.6				1.00E-01			9		
	1.35E-02	U	6.9E-02	6.9E-02	1.22E-01	pCi/g	0.11	4/22/11 03:17 a		52.5	GER11\$1	
15	-1.21E-02	U	RPD 3790.3				1.00E-01			9		
EU-154	-2.08E-02	U	1.2E-01	1.2E-01	2.04E-01	pCi/g	-0.1	4/22/11 03:17 a		52.5	GER11\$1	
	2.46E-03	U	RPD -253.7				1.00E-01			9		
EU-155	-1.52E-02	U	6.7E-02	6.7E-02	1.15E-01	pCi/g	-0.13	4/22/11 03:17 a		52.5	GER11\$1	
	9.31E-03	U	RPD -835.1				1.00E-01			9		
RA-226	4.71E-01	U	1.4E-01	1.4E-01	1.97E-01	pCi/g	-0.45	4/22/11 03:17 a		52.5	GER11\$1	
	3.84E-01	U	RPD 20.5				(2.4)			9		
							(6.8)			9		

No. of Results: 7 Comments:

FORM II
BLANK RESULTS

Date: 26-Apr-11

Lab Name: TestAmerica
Matrix: SOIL

SDG: J01076
Report No.: 46341

TestAmerica Laboratories, Inc.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Report DB ID:	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa	Aliquot Size	Primary Detector
Batch: 1104148	GAMMA_GS	U	9.7E-02	9.7E-02	Work Order: MG0921AA	pCi/g	Report DB ID: MG0921AB	-0.25	4/22/11 06:45 a	52.0	9	GER7\$1
AMERICIUM 241	-4.07E-02	U						-0.84				
CO-60	3.42E-02	U	4.8E-02	4.8E-02	9.71E-02	pCi/g		0.35	4/22/11 06:45 a	52.0	9	GER7\$1
CS-137	-1.37E-02	U	4.8E-02	4.8E-02	8.21E-02	pCi/g		(1.4)				
EU-152	8.18E-02	U	1.1E-01	1.1E-01	2.05E-01	pCi/g		-0.17	4/22/11 06:45 a	52.0	9	GER7\$1
								-0.57				
16	EU-154	7.75E-02	U	1.3E-01	1.3E-01	2.57E-01	1.00E-01	0.4	4/22/11 06:45 a	52.0	9	GER7\$1
								(1.5)				
EU-155	3.56E-02	U	8.5E-02	8.5E-02	1.53E-01	1.00E-01		0.3	4/22/11 06:45 a	52.0	9	GER7\$1
RA-226	3.99E-02	U	2.1E-01	2.1E-01	2.24E-01	pCi/g		(1.2)				
								0.23	4/22/11 06:45 a	52.0	9	GER7\$1
								0.84				
								0.18	4/22/11 06:45 a	52.0	9	GER7\$1
								0.38				
								0				
No. of Results: 7	Comments:											

TestAmerica MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptsTlRchBlank U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc|MDA,Md, Total Uncrt, CRDL, RDL or not identified by gamma scan software.
 V5.2.12 A2002

FORM II
LCS RESULTS

Date: 26-Apr-11

Lab Name: TestAmerica

Matrix: SOIL

SDG: J01076
 Report No. : 46341

Parameter	Result	Count	Total	Report	Expected	Recovery,	Aliquot	Primary
	Qual	Error (2 s)	Uncert(2 s)	MDC MDA	Unit	Yield	Bias	Detector
Batch: 1104148	GAMMA_GS			Work Order: MG0921AC	Report DB ID: MG0921CS			
AMERICIUM 241	4.09E+01	5.0E+00	5.0E+00	7.34E-01	pCi/g	4.02E+01	5.7E-03	4/22/11 10:15 a
CO-60	1.93E+01	2.4E+00	2.4E+00	1.17E-01	pCi/g	70	130	0.0
CS-137	4.35E+01	5.9E+00	5.9E+00	1.35E-01	pCi/g	70	130	99%
No. of Results: 3	Comments:			Rec Limits:		0.0		4/22/11 10:15 a
				Rec Limits:		0.0		54.51
				Rec Limits:		0.0		GER11\$1
						g		g

Lot No., Due Date: J1D130553; 05/04/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1104148; RGAMMA Gamma by GER
SDG, Matrix: J01076; SOIL

1.0 COC		
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓	Yes No N/A
2.0 QC Batch		
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓	Yes No N/A
2.2 Are the QC appropriate for the analysis included in the batch?	✓	Yes No N/A
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓	Yes No N/A
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓	Yes No N/A
3.0 QC & Samples		
3.1 Is the blank results, yield, and MDA within contract limits?	✓	Yes No N/A
3.2 Is the LCS result, yield, and MDA within contract limits?	✓	Yes No N/A
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	✓	Yes No N/A
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓	Yes No N/A
3.5 Are the sample yields and MDAs within contract limits?	✓	Yes No N/A
4.0 Raw Data		
4.1 Were results calculated in the correct units?	✓	Yes No N/A
4.2 Were analysis volumes entered correctly?	✓	Yes No N/A
4.3 Were Yields entered correctly?	✓	Yes No N/A
4.4 Were spectra reviewed/meet contractual requirements?	✓	Yes No N/A
4.5 Were raw counts reviewed for anomalies?	✓	Yes No N/A
5.0 Other		
5.1 Are all nonconformances included and noted?	✓	Yes No N/A
5.2 Are all required forms filled out?	✓	Yes No N/A
5.3 Was the correct methodology used?	✓	Yes No N/A
5.4 Was transcription checked?	✓	Yes No N/A
5.5 Were all calculations checked at a minimum frequency?	✓	Yes No N/A
5.6 Are worksheet entries complete and correct?	✓	Yes No N/A
6.0 Comments on any No response: NCM 10-18216		

First Level

TestAmerica Richland

QAS_RADCALCv4.8.44

TestAmerica Laboratories, Inc.

Date

1/25/11

Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 11041468

Review Item	Yes (✓)	No (✗)	NA (✗)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓	✓	
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result \leq the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result $<$ the Contract Detection Limit?	✓		
4. Is the blank result $>$ the Contract Detection Limit but the sample result $<$ the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity \leq the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			
1. Are all Non-conformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: CRDL = 0.1 pCi/g
See NCR # 10-18216

Second Level Review:

Date: 4/25/11

Clouseau Nonconformance Memo



NCM #: **10-18216**
NCM Initiated By: Lisa Antonson
Date Opened: 04/25/2011

Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Counting
Tests: Gamma by GER
Lot #'s (Sample #'s): J1D130553 (1,2,3,4,5),
J1D140000 (148),
QC Batches: 1104148,

Nonconformance: MDA not met
Subcategory: Data accepted

Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Lisa Antonson	04/25/2011	CRDL is not met in this batch due to shortened count times based on priority processing.

Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Lisa Antonson	04/25/2011	Data accepted.

Client Notification Summary

<u>Client</u>	<u>Project Manager</u>	<u>Notified</u>	<u>Response</u>	<u>How Notified</u>	<u>Note</u>
	<u>Response</u>		<u>Response Note</u>		

Quality Assurance Verification

<u>Verified By</u>	<u>Due Date</u>	<u>Status</u>	<u>Notes</u>
This section not yet completed by QA.			

Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>
----------------------	--------------------	-----------------

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-190-045	Page 1 of 1
Collector BC Koelling	Company Contact Joan Kessner	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 8L	Data Turnaround 21 Days
Project Designation 100N Field Remediation - Soil In-Process	Sampling Location 128-N-1 Excavation		SAF No. RC-190		
Ice Chest No. NA	Field Logbook No. EL-1652-2	COA R128N12000	Method of Shipment Hand Delivered		
Shipped To TestAmerica Incorporated, Richland	Offsite Property No. NA	Bill of Lading/Air Bill No. NA			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>None</i> <i>SDG/H/Tol O76</i> <i>Lot #T1D130553</i>					
Special Handling and/or Storage <i>None</i>					
SAMPLE ANALYSIS <i>MES</i>					
Sample No.	Matrix *	Sample Date 4-12-11	Sample Time 0915	Cool 4C	Cool 4C
J1H221	SOIL	4-12-11	0915	MEGMS	MEGMS
J1H222	SOIL	4-12-11	0925	MEGNA	MEGNA
J1H223	SOIL	4-12-11	0930	MEGNC	MEGNC
J1H224	SOIL	4-12-11	0935	MEGND	MEGND
J1H225	SOIL	4-12-11	0940	MEGNE	MEGNE
CHAIN OF POSSESSION					
Relinquished By/Removed From <i>John W. Bell</i>	Date/Time 10:30	Received By/Stored In <i>John W. Bell</i>	Date/Time 4/12/11		
Relinquished By/Removed From <i>John W. Bell</i>	Date/Time 15:30	Received By/Stored In <i>A. Fischer A. Fischer</i>	Date/Time 4-12-11		
Relinquished By/Removed From <i>A. Fischer A. Fischer</i>	Date/Time 12:30	Received By/Stored In <i>John W. Bell</i>	Date/Time 4-13-11		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time		
LABORATORY SECTION	Received By	Title			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By			

(1) ICP Metals - 6010TR (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV) (Mercury)
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-155, Radium-226}

Europium-152, Europium-155,

Radium-226



Europium-152, Europium-155,
Radium-226

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 4/13/11 1230 GM Screen Result (out) .3 (in) .8 Initials CK

Client: WCH SDG #: J01076 NA [] SAF #: R C-190 NA []

Work Order Number: J1D130553 Chain of Custody # R C-190-045

Shipping Container ID: hand delivery NA [] Air Bill # _____ NA []

Item 1 through 5 for shipping container only. Initial appropriate response.

1. Custody Seals on shipping container intact? Yes CK No [] No Custody Seal []
2. Custody Seals dated and signed? Yes CK No [] No Custody Seal []
3. Chain of Custody record present? Yes CK No []
4. Cooler temperature: Ice NA CK 5. Vermiculite/packing materials is NA [] Wet [] Dry CK

Item 6 through 10 for samples. Initial appropriate response.

6. Number of samples in shipping container (Each sample may contain multiple bottles): 5 samples @ 1X250 MCP per each
7. Sample holding times exceeded? NA [] Yes [] No CK
8. Samples have:
CK tape
CK custody seals (Soil) hazard labels
CK appropriate sample labels
9. Samples:
CK are in good condition
CK are broken
CK are leaking
CK have air bubbles (Only for samples requiring no head space)
10. Sample pH appropriate for analysis requested Yes [] No [] N/A CK (Note discrepancies in #13)
(If acidification necessary, then document sample ID, initial pH, amount of HNO₃ added and pH after addition)

RPL ID # of preservative used :

11. Sample Location, Sample Collector Listed? * Yes CK No []

*For documentation only. No corrective action needed.

12. Were any anomalies identified in sample receipt? Yes [] No CK

13. Description of anomalies (include sample numbers): NA CK

See other side for additional comments

Sample Custodian: Camryn Lys Date: 4/13/11 1230

Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is

Project Manager: Rhonda Dyer

Date: 4/13/11

10C4 Soil Fluor-187 Th/L-NCR

14/14/2011 1:47:15 PM

Batch #:	127642, Washington Closure Hanford LLC	AX Gamma Prp PRP003/GAM001	Balance Id:	1120421763
Bechtel Hanford, Inc.		TA Gamma by HPGE	Pipet #:	
AnalytDueDate:	05/04/2011	51 CLIENT: HANFORD	Sep1 DT/Tm Tech:	
Laboratories:	All Tests: 1104148	PM, Quote: RW2, 27038	Sep2 DT/Tm Tech:	
MGOM5-1-AA	SOIL	pCi/g AXTA,	Prep Tech: BouslaughP	

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt /Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
J1D130553-1-SAMP 04/12/2011 09:15	52.60g,in	52.60g					52.5	20min	G/H	0242	4/11/11
MGOM5-1-AC-X J1D130553-1-DUP 04/12/2011 09:15					AmtRec: 1X250MLP	#Containers: 1	52.50g,in	52.50g		Scr:	Alpha: 6/1 0037
MGNA-1-AA J1D130553-2-SAMP 04/12/2011 09:25					AmtRec: 1X250MLP	#Containers: 1	43.40g,in	43.40g		Scr:	Alpha: 6/4 0037
MGOND-1-AA J1D130553-3-SAMP 04/12/2011 09:30					AmtRec: 1X250MLP	#Containers: 1	54.00g,in	54.00g		Scr:	Alpha: 6/7 0038
MGONE-1-AA J1D130553-4-SAMP 04/12/2011 09:35					AmtRec: 1X250MLP	#Containers: 1	46.90g,in	46.90g		Scr:	Alpha: 6/1 1044 4/10/11
MG092-1-AA-B J1D140000-148-BLK 04/14/2011 10:45 pd					AmtRec: 1X250MLP	#Containers: 1	53.20g,in	53.20g		Scr:	Alpha: 6/7 0038

TestAmerica Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2
Richland Wa. pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

WO Cnt: 7
Prep_SamplePrep v4.8.49
ISV - Insufficient Volume for Analysis

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Richland, WA.

4/25/2011 2:44:33 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/25/2010, 4/30/2011, Batch: '1104148', User: 'ALL Order By DateTimeAccepting'

Q	Batch	Work Ord	CurStatus	Accepting	Comments
	1104148				
AC		Rev1C	BouslaughP	4/14/2011 12:46:35	
SC			Maucieris	IsBatched	4/14/2011 10:45:40 AM
SC			BouslaughP	InPrep	4/14/2011 12:46:35 PM
SC			BouslaughP	Prep1C	4/14/2011 1:52:27 PM
SC			DawkinsO	InCnt1	4/14/2011 3:49:54 PM
SC			ClarkR	CalcC	4/22/2011 3:01:26 PM
SC			antonsonl	Rev1C	4/25/2011 2:44:13 PM
AC			BouslaughP		4/14/2011 1:52:27 PM
AC			DawkinsO		4/14/2011 3:49:54 PM
AC			ClarkR		4/22/2011 3:01:26 PM
AC			antonsonl		4/25/2011 2:44:13 PM

AC: Accepting Entry, SC: Status Change

TestAmerica Richland

Richland Wa.

TestAmerica Laboratories, Inc.

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Grp Rec Cnt: 5
ICOFCFractions v4.8.44

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-14601-1

SDG Number: J01076

Job Description: SAF# RC-190

For:
Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354
Attention: Joan H Kessner



Approved for release.
Kae E Yoder
Project Manager II
5/5/2011 11:34 AM

Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
05/05/2011

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-14601-1

SDG #: J01076

SAF#: RC-190

Date SDG Closed: April 14, 2011

Data Deliverable: 21 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1H221	280-14601-1	6010/7471/WTPH-D+/8260A/8270A/ 8082/8310	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8310
J1H222	280-14601-2	6010/7471/WTPH-D+/8260A/8270A/ 8082/8310	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8310
J1H223	280-14601-3	6010/7471/WTPH-D+/8260A/8270A/ 8082/8310	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8310
J1H224	280-14601-4	6010/7471/WTPH-D+/8260A/8270A/ 8082/8310	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8310
J1H225	280-14601-5	6010/7471/WTPH-D+/8260A/8270A/ 8082/8310	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8310

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this Case Narrative. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the signature on the Report Cover.

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards.

The results, RLs and MDLs included in this report have been adjusted for dry weight, as appropriate.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 4/14/2011; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 3.4 C and 4.1 C.

GC/MS VOLATILES - SW846 8260B

Low levels of Acetone and Methylene Chloride, common laboratory contaminants, are present in the method blank associated with batch 280-62448. Because the concentrations in the method blank are not present at levels greater than the reporting limits, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "B".

The MS/MSD performed on sample J1H225 exhibited spike compound recoveries outside the control limits, and the associated sample results have been flagged "T". The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GC/MS SEMIVOLATILES - SW846 8270C

Compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene were unresolved in sample J1H225 due to matrix interferences. It can be noted that these compounds were adequately resolved in associated standards, indicating the instrument is achieving separation. The combined peak was reported as Benzo(b)fluoranthene, while Benzo(k)fluoranthene was reported as undetected even though it may be present. Associated results have been flagged with a "K".

No other anomalies were encountered.

GC SEMIVOLATILES - SW846 8082 - PCBs

The MS/MSD performed on sample J1H225 exhibited percent recoveries outside the control limits for Aroclor 1016 and Aroclor 1260, and the associated sample results have been flagged "N". In addition, the RPD limit was exceeded for Aroclor 1260. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GC SEMIVOLATILES - NWTPH-Dx - DRO

No anomalies were encountered.

HPLC - SW846 8310 - PAHs

The RPD between the primary and confirmation columns exceeded 40% for analytes in sample J1H225. The lower of the two values have been reported, as matrix interference is evident. Associated results have been flagged with an "X".

No other anomalies were encountered.

TOTAL METALS - SW846 6010B/7471A

Serial dilution of a digestate in batch 280-62837 indicates that physical and chemical interferences are present for Chromium, Nickel, Vanadium and Zinc. Results have been flagged with an "X".

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the methods. Due to matrix interferences causing the internal standard to fail high, the majority of the Method 6010B elements for sample J1H225 had to be analyzed at a 2X dilution. The reporting limits have been adjusted relative to the dilution required.

Aluminum, Iron and Magnesium are present at levels greater than the reporting limits in the method blank associated with batch 280-62837. As the associated sample amounts are ten times greater than the method blank concentrations, corrective action is deemed unnecessary.

Low levels of Calcium, Nickel, Silicon, Zinc and Manganese are present in the method blank associated with batch 280-62837. Because the concentrations in the method blank are not present at levels greater than the reporting limits, corrective action is deemed unnecessary.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Iron and Manganese in the Matrix Spike performed on sample J1H221; therefore, control limits are not applicable.

Boron was recovered outside the control limits in the SW846 6010B Matrix Spike performed on sample J1H221, and the associated sample result has been flagged "N". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

The SW846 6010B duplicate analysis of sample J1H221 exhibited RPD data outside the control limits for Boron and Lead, and the associated sample results have been flagged "M". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
GC/MS VOA		
	B	Analyte was found in the associated method blank as well as in the sample.
	U	Analyzed for but not detected.
	J	Indicates an Estimated Value for TICs
	T	MS, MSD: Recovery exceeds upper or lower control limits.
	N	Presumptive evidence of material.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	U	Analyzed for but not detected.
	K	Benzo (b&k) fluoranthene are unresolved due to matrix, result is reported as Benzo(b)fluoranthene.
	J	Indicates an Estimated Value for TICs
	N	Presumptive evidence of material.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	U	Analyzed for but not detected.
	N	MS, MSD: Spike recovery exceeds upper or lower control limits.
	*	MS/MSD RPD exceeded the control limit
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Lab Section	Qualifier	Description
Metals		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	N	Recovery exceeds upper or lower control limits
	M	Sample duplicate precision not met.
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.
HPLC/IC		
	U	Analyzed for but not detected.
	X	More than 40% difference between columns, lower result reported.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL DEN	SW846 8260B	
Purge and Trap	TAL DEN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL DEN	SW846 8270C	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL DEN	SW846 8082	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Northwest - Semi-Volatile Petroleum Products (GC)	TAL DEN	NWTPH NWTPH-Dx	
Ultrasonic Extraction	TAL DEN		SW846 3550C
PAHs (HPLC)	TAL DEN	SW846 8310	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B
Mercury (CVAA)	TAL DEN	SW846 7471A	
Preparation, Mercury	TAL DEN		SW846 7471A
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Method	Analyst	Analyst ID
SW846 8260B	Reinhardt, Jason	JR
SW846 8270C	Hoffman, Michael G	MGH
SW846 8082	Jackson, Todd D	TDJ
NWTPH NWTPH-Dx	Birdsell, Matthew R	MRB
SW846 6010B	Bowen, Heidi E	HEB
SW846 6010B	Harre, John K	JKH
SW846 7471A	Stoltz, Katie	KS
ASTM D-2216	Berry III, Paul B	PBB
SW846 8310	Hall, Koley J	KJH

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-14601-1	J1H221	Solid	04/12/2011 0915	04/14/2011 0930
280-14601-2	J1H222	Solid	04/12/2011 0925	04/14/2011 0930
280-14601-3	J1H223	Solid	04/12/2011 0930	04/14/2011 0930
280-14601-4	J1H224	Solid	04/12/2011 0935	04/14/2011 0930
280-14601-5	J1H225	Solid	04/12/2011 0940	04/14/2011 0930

SAMPLE RESULTS

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H221

Lab Sample ID: 280-14601-1

Client Matrix: Solid

% Moisture: 1.5

Date Sampled: 04/12/2011 0915
Date Received: 04/14/2011 0930**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Prep Method:	5030B	Prep Batch:	280-62448	Lab File ID:	G4494.D
Dilution:	1.0			Initial Weight/Volume:	5.239 g
Analysis Date:	04/15/2011 1414			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		6.7	J B	5.2	19
Benzene		0.46	U	0.46	4.8
Bromodichloromethane		0.21	U	0.21	4.8
Bromoform		0.22	U	0.22	4.8
Bromomethane		0.48	U	0.48	9.7
2-Butanone (MEK)		1.8	U	1.8	9.7
Carbon disulfide		0.41	U	0.41	4.8
Carbon tetrachloride		0.61	U	0.61	4.8
Chlorobenzene		0.52	U	0.52	4.8
Dibromochloromethane		0.55	U	0.55	4.8
Chloroethane		0.86	U	0.86	9.7
Chloroform		0.28	U	0.28	4.8
Chloromethane		0.75	U	0.75	9.7
1,1-Dichloroethane		0.20	U	0.20	4.8
1,2-Dichloroethane		0.68	U	0.68	4.8
1,1-Dichloroethene		0.57	U	0.57	4.8
1,2-Dichloroethene, Total		0.38	U	0.38	4.8
1,2-Dichloropropane		0.53	U	0.53	4.8
cis-1,3-Dichloropropene		1.2	U	1.2	4.8
trans-1,3-Dichloropropene		0.65	U	0.65	4.8
Ethylbenzene		0.65	U	0.65	4.8
2-Hexanone		4.7	U	4.7	19
Methylene Chloride		1.7	J B	0.73	4.8
4-Methyl-2-pentanone (MIBK)		4.2	U	4.2	9.7
Styrene		0.61	U	0.61	4.8
1,1,2,2-Tetrachloroethane		0.59	U	0.59	4.8
Tetrachloroethene		0.57	U	0.57	4.8
Toluene		0.67	U	0.67	4.8
1,1,1-Trichloroethane		0.50	U	0.50	4.8
1,1,2-Trichloroethane		0.85	U	0.85	4.8
Trichloroethene		0.22	U	0.22	4.8
Vinyl chloride		1.3	U	1.3	4.8
Xylenes, Total		0.59	U	0.59	4.8
Surrogate		%Rec	Qualifier	Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		112		58 - 140	
Toluene-d8 (Surr)		112		80 - 126	
4-Bromofluorobenzene (Surr)		122		76 - 127	
Dibromofluoromethane (Surr)		117		75 - 121	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H221

Lab Sample ID: 280-14601-1

Client Matrix: Solid

% Moisture: 1.5

Date Sampled: 04/12/2011 0915

Date Received: 04/14/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Prep Method:	5030B	Prep Batch:	280-62448	Lab File ID:	G4494.D
Dilution:	1.0			Initial Weight/Volume:	5.239 g
Analysis Date:	04/15/2011 1414			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				

Tentatively Identified Compounds **Number TIC's Found:** 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
1066-40-6	Silanol, trimethyl-	6.76	7.4	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2
Client Matrix: Solid

% Moisture: 1.1

Date Sampled: 04/12/2011 0925
Date Received: 04/14/2011 0930**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Prep Method:	5030B	Prep Batch:	280-62448	Lab File ID:	G4495.D
Dilution:	1.0			Initial Weight/Volume:	5.571 g
Analysis Date:	04/15/2011 1436			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		10	J B	4.9	18
Benzene		0.43	U	0.43	4.5
Bromodichloromethane		0.20	U	0.20	4.5
Bromoform		0.21	U	0.21	4.5
Bromomethane		0.45	U	0.45	9.1
2-Butanone (MEK)		1.7	U	1.7	9.1
Carbon disulfide		0.38	U	0.38	4.5
Carbon tetrachloride		0.57	U	0.57	4.5
Chlorobenzene		0.49	U	0.49	4.5
Dibromochloromethane		0.52	U	0.52	4.5
Chloroethane		0.81	U	0.81	9.1
Chloroform		0.26	U	0.26	4.5
Chloromethane		0.70	U	0.70	9.1
1,1-Dichloroethane		0.19	U	0.19	4.5
1,2-Dichloroethane		0.64	U	0.64	4.5
1,1-Dichloroethene		0.54	U	0.54	4.5
1,2-Dichloroethene, Total		0.35	U	0.35	4.5
1,2-Dichloropropane		0.50	U	0.50	4.5
cis-1,3-Dichloropropene		1.2	U	1.2	4.5
trans-1,3-Dichloropropene		0.61	U	0.61	4.5
Ethylbenzene		0.61	U	0.61	4.5
2-Hexanone		4.4	U	4.4	18
Methylene Chloride		1.3	J B	0.68	4.5
4-Methyl-2-pentanone (MIBK)		4.0	U	4.0	9.1
Styrene		0.57	U	0.57	4.5
1,1,2,2-Tetrachloroethane		0.55	U	0.55	4.5
Tetrachloroethene		0.54	U	0.54	4.5
Toluene		0.63	U	0.63	4.5
1,1,1-Trichloroethane		0.47	U	0.47	4.5
1,1,2-Trichloroethane		0.80	U	0.80	4.5
Trichloroethene		0.21	U	0.21	4.5
Vinyl chloride		1.2	U	1.2	4.5
Xylenes, Total		0.55	U	0.55	4.5
Surrogate		%Rec	Qualifier	Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		84		58 - 140	
Toluene-d8 (Surr)		97		80 - 126	
4-Bromofluorobenzene (Surr)		89		76 - 127	
Dibromofluoromethane (Surr)		92		75 - 121	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2

Date Sampled: 04/12/2011 0925

Client Matrix: Solid

% Moisture: 1.1

Date Received: 04/14/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Prep Method:	5030B	Prep Batch:	280-62448	Lab File ID:	G4495.D
Dilution:	1.0			Initial Weight/Volume:	5.571 g
Analysis Date:	04/15/2011 1436			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	6.76	7.8	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H223

Lab Sample ID: 280-14601-3

Client Matrix: Solid

% Moisture: 5.3

Date Sampled: 04/12/2011 0930

Date Received: 04/14/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Prep Method:	5030B	Prep Batch:	280-62448	Lab File ID:	G4496.D
Dilution:	1.0			Initial Weight/Volume:	5.375 g
Analysis Date:	04/15/2011 1457			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		12	J B	5.3	20
Benzene		0.46	U	0.46	4.9
Bromodichloromethane		0.22	U	0.22	4.9
Bromoform		0.23	U	0.23	4.9
Bromomethane		0.49	U	0.49	9.8
2-Butanone (MEK)		1.8	U	1.8	9.8
Carbon disulfide		0.41	U	0.41	4.9
Carbon tetrachloride		0.62	U	0.62	4.9
Chlorobenzene		0.53	U	0.53	4.9
Dibromochloromethane		0.56	U	0.56	4.9
Chloroethane		0.87	U	0.87	9.8
Chloroform		0.28	U	0.28	4.9
Chloromethane		0.76	U	0.76	9.8
1,1-Dichloroethane		0.21	U	0.21	4.9
1,2-Dichloroethane		0.69	U	0.69	4.9
1,1-Dichloroethene		0.58	U	0.58	4.9
1,2-Dichloroethene, Total		0.38	U	0.38	4.9
1,2-Dichloropropane		0.54	U	0.54	4.9
cis-1,3-Dichloropropene		1.3	U	1.3	4.9
trans-1,3-Dichloropropene		0.66	U	0.66	4.9
Ethylbenzene		0.66	U	0.66	4.9
2-Hexanone		4.8	U	4.8	20
Methylene Chloride		1.5	J B	0.74	4.9
4-Methyl-2-pentanone (MIBK)		4.3	U	4.3	9.8
Styrene		0.62	U	0.62	4.9
1,1,2,2-Tetrachloroethane		0.60	U	0.60	4.9
Tetrachloroethene		0.58	U	0.58	4.9
Toluene		0.68	U	0.68	4.9
1,1,1-Trichloroethane		0.51	U	0.51	4.9
1,1,2-Trichloroethane		0.86	U	0.86	4.9
Trichloroethene		0.23	U	0.23	4.9
Vinyl chloride		1.3	U	1.3	4.9
Xylenes, Total		0.60	U	0.60	4.9
Surrogate		%Rec	Qualifier	Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		82		58 - 140	
Toluene-d8 (Surr)		98		80 - 126	
4-Bromofluorobenzene (Surr)		90		76 - 127	
Dibromofluoromethane (Surr)		94		75 - 121	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H223

Lab Sample ID: 280-14601-3

Date Sampled: 04/12/2011 0930

Client Matrix: Solid

% Moisture: 5.3

Date Received: 04/14/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B

Analysis Batch: 280-62623

Instrument ID: MSV_G

Prep Method: 5030B

Prep Batch: 280-62448

Lab File ID: G4496.D

Dilution:

1.0

Initial Weight/Volume: 5.375 g

Analysis Date: 04/15/2011 1457

Final Weight/Volume: 5 mL

Prep Date: 04/15/2011 0600

Tentatively Identified Compounds

Number TIC's Found: 1

Cas Number

Analyte

RT

Est. Result (ug/Kg)

Qualifier

Unknown

6.77

6.2

N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H224

Lab Sample ID: 280-14601-4

Date Sampled: 04/12/2011 0935

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Prep Method:	5030B	Prep Batch:	280-62448	Lab File ID:	G4497.D
Dilution:	1.0			Initial Weight/Volume:	5.542 g
Analysis Date:	04/15/2011 1519			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		37	B	4.9	18
Benzene		0.43	U	0.43	4.6
Bromodichloromethane		0.20	U	0.20	4.6
Bromoform		0.21	U	0.21	4.6
Bromomethane		0.46	U	0.46	9.2
2-Butanone (MEK)		1.7	U	1.7	9.2
Carbon disulfide		0.38	U	0.38	4.6
Carbon tetrachloride		0.58	U	0.58	4.6
Chlorobenzene		0.49	U	0.49	4.6
Dibromochloromethane		0.52	U	0.52	4.6
Chloroethane		0.82	U	0.82	9.2
Chloroform		0.27	U	0.27	4.6
Chloromethane		0.71	U	0.71	9.2
1,1-Dichloroethane		0.19	U	0.19	4.6
1,2-Dichloroethane		0.64	U	0.64	4.6
1,1-Dichloroethene		0.54	U	0.54	4.6
1,2-Dichloroethene, Total		0.36	U	0.36	4.6
1,2-Dichloropropane		0.50	U	0.50	4.6
cis-1,3-Dichloropropene		1.2	U	1.2	4.6
trans-1,3-Dichloropropene		0.61	U	0.61	4.6
Ethylbenzene		0.61	U	0.61	4.6
2-Hexanone		4.5	U	4.5	18
Methylene Chloride		1.4	J B	0.69	4.6
4-Methyl-2-pentanone (MIBK)		4.0	U	4.0	9.2
Styrene		0.58	U	0.58	4.6
1,1,2,2-Tetrachloroethane		0.56	U	0.56	4.6
Tetrachloroethene		0.54	U	0.54	4.6
Toluene		0.63	U	0.63	4.6
1,1,1-Trichloroethane		0.48	U	0.48	4.6
1,1,2-Trichloroethane		0.81	U	0.81	4.6
Trichloroethene		0.21	U	0.21	4.6
Vinyl chloride		1.2	U	1.2	4.6
Xylenes, Total		0.56	U	0.56	4.6
Surrogate		%Rec	Qualifier	Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		113		58 - 140	
Toluene-d8 (Surr)		116		80 - 126	
4-Bromofluorobenzene (Surr)		107		76 - 127	
Dibromofluoromethane (Surr)		116		75 - 121	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H224

Lab Sample ID: 280-14601-4

Date Sampled: 04/12/2011 0935

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Prep Method:	5030B	Prep Batch:	280-62448	Lab File ID:	G4497.D
Dilution:	1.0			Initial Weight/Volume:	5.542 g
Analysis Date:	04/15/2011 1519			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				

Tentatively Identified Compounds **Number TIC's Found:** **2**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	6.77	8.2	N J
71-36-3	n-Butanol	8.14	24	J J N

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H225

Lab Sample ID: 280-14601-5

Date Sampled: 04/12/2011 0940

Client Matrix: Solid

% Moisture: 1.6

Date Received: 04/14/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Prep Method:	5030B	Prep Batch:	280-62448	Lab File ID:	G4498.D
Dilution:	1.0			Initial Weight/Volume:	5.507 g
Analysis Date:	04/15/2011 1540			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		7.5	J B	5.0	18
Benzene		0.43	U	0.43	4.6
Bromodichloromethane		0.20	U	0.20	4.6
Bromoform		0.21	U	0.21	4.6
Bromomethane		0.46	U	0.46	9.2
2-Butanone (MEK)		1.7	U	1.7	9.2
Carbon disulfide		0.39	U	0.39	4.6
Carbon tetrachloride		0.58	U	0.58	4.6
Chlorobenzene		0.50	U T	0.50	4.6
Dibromochloromethane		0.53	U	0.53	4.6
Chloroethane		0.82	U	0.82	9.2
Chloroform		0.27	U	0.27	4.6
Chloromethane		0.71	U	0.71	9.2
1,1-Dichloroethane		0.19	U	0.19	4.6
1,2-Dichloroethane		0.65	U	0.65	4.6
1,1-Dichloroethene		0.54	U	0.54	4.6
1,2-Dichloroethene, Total		0.36	U T	0.36	4.6
1,2-Dichloropropane		0.51	U T	0.51	4.6
cis-1,3-Dichloropropene		1.2	U	1.2	4.6
trans-1,3-Dichloropropene		0.62	U	0.62	4.6
Ethylbenzene		0.62	U T	0.62	4.6
2-Hexanone		4.5	U	4.5	18
Methylene Chloride		1.2	J B	0.69	4.6
4-Methyl-2-pentanone (MIBK)		4.0	U	4.0	9.2
Styrene		0.58	U	0.58	4.6
1,1,2,2-Tetrachloroethane		0.56	U	0.56	4.6
Tetrachloroethene		0.54	U	0.54	4.6
Toluene		0.64	U T	0.64	4.6
1,1,1-Trichloroethane		0.48	U	0.48	4.6
1,1,2-Trichloroethane		0.81	U	0.81	4.6
Trichloroethene		0.21	U	0.21	4.6
Vinyl chloride		1.2	U	1.2	4.6
Xylenes, Total		0.56	U	0.56	4.6
Surrogate		%Rec	Qualifier	Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		95		58 - 140	
Toluene-d8 (Surr)		104		80 - 126	
4-Bromofluorobenzene (Surr)		95		76 - 127	
Dibromofluoromethane (Surr)		96		75 - 121	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H225

Lab Sample ID: 280-14601-5

Date Sampled: 04/12/2011 0940

Client Matrix: Solid

% Moisture: 1.6

Date Received: 04/14/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Prep Method:	5030B	Prep Batch:	280-62448	Lab File ID:	G4498.D
Dilution:	1.0			Initial Weight/Volume:	5.507 g
Analysis Date:	04/15/2011 1540			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	6.77	6.5	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H221

Lab Sample ID: 280-14601-1

Client Matrix: Solid

% Moisture: 1.5

Date Sampled: 04/12/2011 0915

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3416.D
Dilution:	1.0			Initial Weight/Volume:	30.8 uL
Analysis Date:	04/25/2011 1322			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	330
Acenaphthylene		17	U	17	330
Anthracene		17	U	17	330
Benzo[a]anthracene		20	U	20	330
Benzo[a]pyrene		20	U	20	330
Benzo[b]fluoranthene		26	U	26	330
Benzo[ghi]perylene		16	U	16	330
Benzo[k]fluoranthene		40	U	40	330
Bis(2-chloroethoxy)methane		23	U	23	330
Bis(2-chloroethyl)ether		16	U	16	330
bis (2-chloroisopropyl) ether		23	U	23	330
Bis(2-ethylhexyl) phthalate		110	J	45	330
4-Bromophenyl phenyl ether		19	U	19	330
Butyl benzyl phthalate		43	U	43	330
Carbazole		36	U	36	330
4-Chloroaniline		81	U	81	330
4-Chloro-3-methylphenol		65	U	65	330
2-Chloronaphthalene		9.9	U	9.9	330
2-Chlorophenol		21	U	21	330
4-Chlorophenyl phenyl ether		21	U	21	330
Chrysene		27	U	27	330
Dibenz(a,h)anthracene		19	U	19	330
Dibenzofuran		20	U	20	330
1,2-Dichlorobenzene		22	U	22	330
1,3-Dichlorobenzene		12	U	12	330
1,4-Dichlorobenzene		13	U	13	330
3,3'-Dichlorobenzidine		89	U	89	650
2,4-Dichlorophenol		9.9	U	9.9	330
Diethyl phthalate		26	U	26	330
2,4-Dimethylphenol		65	U	65	330
Dimethyl phthalate		23	U	23	330
Di-n-butyl phthalate		29	U	29	330
4,6-Dinitro-2-methylphenol		330	U	330	650
2,4-Dinitrophenol		330	U	330	820
2,4-Dinitrotoluene		65	U	65	330
2,6-Dinitrotoluene		28	U	28	330
Di-n-octyl phthalate		14	U	14	330
Fluoranthene		36	U	36	330
Fluorene		18	U	18	330
Hexachlorobenzene		29	U	29	330
Hexachlorobutadiene		9.9	U	9.9	330
Hexachlorocyclopentadiene		49	U	49	330
Hexachloroethane		21	U	21	330
Indeno[1,2,3-cd]pyrene		22	U	22	330
Isophorone		17	U	17	330
2-Methylnaphthalene		19	U	19	330

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H221

Lab Sample ID: 280-14601-1

Date Sampled: 04/12/2011 0915

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3416.D
Dilution:	1.0			Initial Weight/Volume:	30.8 g
Analysis Date:	04/25/2011 1322			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	330
3 & 4 Methylphenol		33	U	33	330
Naphthalene		31	U	31	330
2-Nitroaniline		49	U	49	330
3-Nitroaniline		72	U	72	330
4-Nitroaniline		72	U	72	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		9.9	U	9.9	330
4-Nitrophenol		96	U	96	650
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	650
Phenanthrene		17	U	17	330
Phenol		18	U	18	330
Pyrene		12	U	12	330
1,2,4-Trichlorobenzene		28	U	28	330
2,4,5-Trichlorophenol		9.9	U	9.9	330
2,4,6-Trichlorophenol		9.9	U	9.9	330
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		74		50 - 120	
2-Fluorophenol		77		53 - 120	
Nitrobenzene-d5		74		50 - 120	
Phenol-d5		75		52 - 120	
Terphenyl-d14		100		55 - 120	
2,4,6-Tribromophenol		82		51 - 120	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H221

Lab Sample ID: 280-14601-1

Date Sampled: 04/12/2011 0915

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method: 8270C

Analysis Batch: 280-64085

Instrument ID: MSS_D

Prep Method: 3550C

Prep Batch: 280-63346

Lab File ID: D3416.D

Dilution:

1.0

Initial Weight/Volume: 30.8 g

Analysis Date: 04/25/2011 1322

Final Weight/Volume: 1000 uL

Prep Date: 04/21/2011 1020

Injection Volume: 0.5 uL

Tentatively Identified Compounds

Number TIC's Found: 2

Cas Number

Analyte

RT

Est. Result (ug/Kg)

Qualifier

Unknown

2.54

350

N J

Unknown

2.92

2700

N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2

Date Sampled: 04/12/2011 0925

Client Matrix: Solid

% Moisture: 1.1

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3417.D
Dilution:	1.0			Initial Weight/Volume:	30.1 uL
Analysis Date:	04/25/2011 1341			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	330
Acenaphthylene		17	U	17	330
Anthracene		17	U	17	330
Benzo[a]anthracene		20	U	20	330
Benzo[a]pyrene		20	U	20	330
Benzo[b]fluoranthene		26	U	26	330
Benzo[ghi]perylene		16	U	16	330
Benzo[k]fluoranthene		40	U	40	330
Bis(2-chloroethoxy)methane		23	U	23	330
Bis(2-chloroethyl)ether		17	U	17	330
bis (2-chloroisopropyl) ether		23	U	23	330
Bis(2-ethylhexyl) phthalate		100	J	46	330
4-Bromophenyl phenyl ether		19	U	19	330
Butyl benzyl phthalate		43	U	43	330
Carbazole		36	U	36	330
4-Chloroaniline		83	U	83	330
4-Chloro-3-methylphenol		67	U	67	330
2-Chloronaphthalene		10	U	10	330
2-Chlorophenol		21	U	21	330
4-Chlorophenyl phenyl ether		21	U	21	330
Chrysene		27	U	27	330
Dibenz(a,h)anthracene		19	U	19	330
Dibenzofuran		20	U	20	330
1,2-Dichlorobenzene		22	U	22	330
1,3-Dichlorobenzene		12	U	12	330
1,4-Dichlorobenzene		14	U	14	330
3,3'-Dichlorobenzidine		91	U	91	670
2,4-Dichlorophenol		10	U	10	330
Diethyl phthalate		26	U	26	330
2,4-Dimethylphenol		67	U	67	330
Dimethyl phthalate		23	U	23	330
Di-n-butyl phthalate		29	U	29	330
4,6-Dinitro-2-methylphenol		330	U	330	670
2,4-Dinitrophenol		340	U	340	830
2,4-Dinitrotoluene		67	U	67	330
2,6-Dinitrotoluene		28	U	28	330
Di-n-octyl phthalate		15	U	15	330
Fluoranthene		36	U	36	330
Fluorene		18	U	18	330
Hexachlorobenzene		29	U	29	330
Hexachlorobutadiene		10	U	10	330
Hexachlorocyclopentadiene		50	U	50	330
Hexachloroethane		21	U	21	330
Indeno[1,2,3-cd]pyrene		22	U	22	330
Isophorone		17	U	17	330
2-Methylnaphthalene		19	U	19	330

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2

Date Sampled: 04/12/2011 0925

Client Matrix: Solid

% Moisture: 1.1

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3417.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	04/25/2011 1341			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	330
3 & 4 Methylphenol		33	U	33	330
Naphthalene		31	U	31	330
2-Nitroaniline		50	U	50	330
3-Nitroaniline		74	U	74	330
4-Nitroaniline		73	U	73	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		10	U	10	330
4-Nitrophenol		98	U	98	670
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	670
Phenanthrene		17	U	17	330
Phenol		18	U	18	330
Pyrene		12	U	12	330
1,2,4-Trichlorobenzene		28	U	28	330
2,4,5-Trichlorophenol		10	U	10	330
2,4,6-Trichlorophenol		10	U	10	330
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		77		50 - 120	
2-Fluorophenol		77		53 - 120	
Nitrobenzene-d5		74		50 - 120	
Phenol-d5		76		52 - 120	
Terphenyl-d14		102		55 - 120	
2,4,6-Tribromophenol		83		51 - 120	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2

Date Sampled: 04/12/2011 0925

Client Matrix: Solid

% Moisture: 1.1

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3417.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	04/25/2011 1341			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** 3

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.75	150	N J
	Unknown	2.85	150	N J
	Unknown	2.93	3200	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H223

Lab Sample ID: 280-14601-3

Date Sampled: 04/12/2011 0930

Client Matrix: Solid

% Moisture: 5.3

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3418.D
Dilution:	1.0			Initial Weight/Volume:	30.9 g
Analysis Date:	04/25/2011 1400			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		11	U	11	340
Acenaphthylene		17	U	17	340
Anthracene		17	U	17	340
Benzo[a]anthracene		21	U	21	340
Benzo[a]pyrene		21	U	21	340
Benzo[b]fluoranthene		27	U	27	340
Benzo[ghi]perylene		16	U	16	340
Benzo[k]fluoranthene		41	U	41	340
Bis(2-chloroethoxy)methane		24	U	24	340
Bis(2-chloroethyl)ether		17	U	17	340
bis (2-chloroisopropyl) ether		24	U	24	340
Bis(2-ethylhexyl) phthalate		120	J	47	340
4-Bromophenyl phenyl ether		19	U	19	340
Butyl benzyl phthalate		44	U	44	340
Carbazole		37	U	37	340
4-Chloroaniline		84	U	84	340
4-Chloro-3-methylphenol		68	U	68	340
2-Chloronaphthalene		10	U	10	340
2-Chlorophenol		22	U	22	340
4-Chlorophenyl phenyl ether		22	U	22	340
Chrysene		28	U	28	340
Dibenz(a,h)anthracene		19	U	19	340
Dibenzofuran		21	U	21	340
1,2-Dichlorobenzene		23	U	23	340
1,3-Dichlorobenzene		12	U	12	340
1,4-Dichlorobenzene		14	U	14	340
3,3'-Dichlorobenzidine		92	U	92	680
2,4-Dichlorophenol		10	U	10	340
Diethyl phthalate		27	U	27	340
2,4-Dimethylphenol		68	U	68	340
Dimethyl phthalate		24	U	24	340
Di-n-butyl phthalate		30	U	30	340
4,6-Dinitro-2-methylphenol		340	U	340	680
2,4-Dinitrophenol		340	U	340	850
2,4-Dinitrotoluene		68	U	68	340
2,6-Dinitrotoluene		29	U	29	340
Di-n-octyl phthalate		15	U	15	340
Fluoranthene		37	U	37	340
Fluorene		18	U	18	340
Hexachlorobenzene		30	U	30	340
Hexachlorobutadiene		10	U	10	340
Hexachlorocyclopentadiene		51	U	51	340
Hexachloroethane		22	U	22	340
Indeno[1,2,3-cd]pyrene		23	U	23	340
Isophorone		17	U	17	340
2-Methylnaphthalene		19	U	19	340

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H223

Lab Sample ID: 280-14601-3

Date Sampled: 04/12/2011 0930

Client Matrix: Solid

% Moisture: 5.3

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3418.D
Dilution:	1.0			Initial Weight/Volume:	30.9 uL
Analysis Date:	04/25/2011 1400			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	340
3 & 4 Methylphenol		34	U	34	340
Naphthalene		32	U	32	340
2-Nitroaniline		51	U	51	340
3-Nitroaniline		75	U	75	340
4-Nitroaniline		74	U	74	340
Nitrobenzene		23	U	23	340
2-Nitrophenol		10	U	10	340
4-Nitrophenol		99	U	99	680
N-Nitrosodi-n-propylamine		32	U	32	340
N-Nitrosodiphenylamine		22	U	22	340
Pentachlorophenol		340	U	340	680
Phenanthrene		17	U	17	340
Phenol		18	U	18	340
Pyrene		12	U	12	340
1,2,4-Trichlorobenzene		29	U	29	340
2,4,5-Trichlorophenol		10	U	10	340
2,4,6-Trichlorophenol		10	U	10	340
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		62		50 - 120	
2-Fluorophenol		67		53 - 120	
Nitrobenzene-d5		64		50 - 120	
Phenol-d5		66		52 - 120	
Terphenyl-d14		96		55 - 120	
2,4,6-Tribromophenol		80		51 - 120	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H223

Lab Sample ID: 280-14601-3

Date Sampled: 04/12/2011 0930

Client Matrix: Solid

% Moisture: 5.3

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3418.D
Dilution:	1.0			Initial Weight/Volume:	30.9 g
Analysis Date:	04/25/2011 1400			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Tentatively Identified Compounds**Number TIC's Found: 3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.54	1100	N J
	Unknown	2.60	170	N J
	Unknown	2.92	2500	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H224

Lab Sample ID: 280-14601-4

Date Sampled: 04/12/2011 0935

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3419.D
Dilution:	1.0			Initial Weight/Volume:	30.1 uL
Analysis Date:	04/25/2011 1420			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	330
Acenaphthylene		17	U	17	330
Anthracene		17	U	17	330
Benzo[a]anthracene		20	U	20	330
Benzo[a]pyrene		20	U	20	330
Benzo[b]fluoranthene		27	U	27	330
Benzo[ghi]perylene		16	U	16	330
Benzo[k]fluoranthene		40	U	40	330
Bis(2-chloroethoxy)methane		23	U	23	330
Bis(2-chloroethyl)ether		17	U	17	330
bis (2-chloroisopropyl) ether		23	U	23	330
Bis(2-ethylhexyl) phthalate		92	J	47	330
4-Bromophenyl phenyl ether		19	U	19	330
Butyl benzyl phthalate		44	U	44	330
Carbazole		36	U	36	330
4-Chloroaniline		83	U	83	330
4-Chloro-3-methylphenol		67	U	67	330
2-Chloronaphthalene		10	U	10	330
2-Chlorophenol		21	U	21	330
4-Chlorophenyl phenyl ether		21	U	21	330
Chrysene		27	U	27	330
Dibenz(a,h)anthracene		19	U	19	330
Dibenzofuran		20	U	20	330
1,2-Dichlorobenzene		22	U	22	330
1,3-Dichlorobenzene		12	U	12	330
1,4-Dichlorobenzene		14	U	14	330
3,3'-Dichlorobenzidine		91	U	91	670
2,4-Dichlorophenol		10	U	10	330
Diethyl phthalate		26	U	26	330
2,4-Dimethylphenol		67	U	67	330
Dimethyl phthalate		23	U	23	330
Di-n-butyl phthalate		29	U	29	330
4,6-Dinitro-2-methylphenol		330	U	330	670
2,4-Dinitrophenol		340	U	340	830
2,4-Dinitrotoluene		67	U	67	330
2,6-Dinitrotoluene		28	U	28	330
Di-n-octyl phthalate		15	U	15	330
Fluoranthene		36	U	36	330
Fluorene		18	U	18	330
Hexachlorobenzene		29	U	29	330
Hexachlorobutadiene		10	U	10	330
Hexachlorocyclopentadiene		51	U	51	330
Hexachloroethane		22	U	22	330
Indeno[1,2,3-cd]pyrene		22	U	22	330
Isophorone		17	U	17	330
2-Methylnaphthalene		19	U	19	330

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H224

Lab Sample ID: 280-14601-4

Date Sampled: 04/12/2011 0935

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3419.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	04/25/2011 1420			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	330
3 & 4 Methylphenol		33	U	33	330
Naphthalene		31	U	31	330
2-Nitroaniline		51	U	51	330
3-Nitroaniline		74	U	74	330
4-Nitroaniline		73	U	73	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		10	U	10	330
4-Nitrophenol		98	U	98	670
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	670
Phenanthrene		17	U	17	330
Phenol		18	U	18	330
Pyrene		12	U	12	330
1,2,4-Trichlorobenzene		28	U	28	330
2,4,5-Trichlorophenol		10	U	10	330
2,4,6-Trichlorophenol		10	U	10	330
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		71		50 - 120	
2-Fluorophenol		78		53 - 120	
Nitrobenzene-d5		74		50 - 120	
Phenol-d5		73		52 - 120	
Terphenyl-d14		106		55 - 120	
2,4,6-Tribromophenol		81		51 - 120	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H224

Lab Sample ID: 280-14601-4

Date Sampled: 04/12/2011 0935

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3419.D
Dilution:	1.0			Initial Weight/Volume:	30.1 uL
Analysis Date:	04/25/2011 1420			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Tentatively Identified Compounds

Number TIC's Found: 3

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.54	660	N J
	Unknown	2.86	140	N J
	Unknown	2.93	2700	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H225

Lab Sample ID: 280-14601-5

Date Sampled: 04/12/2011 0940

Client Matrix: Solid

% Moisture: 1.6

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3420.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	04/25/2011 1439			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	330
Acenaphthylene		17	U	17	330
Anthracene		110	J	17	330
Benzo[a]anthracene		40	J	20	330
Benzo[a]pyrene		140	J	20	330
Benzo[b]fluoranthene		190	JK	27	330
Benzo[ghi]perylene		16	U	16	330
Benzo[k]fluoranthene		41	UK	41	330
Bis(2-chloroethoxy)methane		23	U	23	330
Bis(2-chloroethyl)ether		17	U	17	330
bis (2-chloroisopropyl) ether		23	U	23	330
Bis(2-ethylhexyl) phthalate		95	J	47	330
4-Bromophenyl phenyl ether		19	U	19	330
Butyl benzyl phthalate		44	U	44	330
Carbazole		36	U	36	330
4-Chloroaniline		83	U	83	330
4-Chloro-3-methylphenol		67	U	67	330
2-Chloronaphthalene		10	U	10	330
2-Chlorophenol		21	U	21	330
4-Chlorophenyl phenyl ether		21	U	21	330
Chrysene		51	J	27	330
Dibenz(a,h)anthracene		19	U	19	330
Dibenzofuran		20	U	20	330
1,2-Dichlorobenzene		22	U	22	330
1,3-Dichlorobenzene		12	U	12	330
1,4-Dichlorobenzene		14	U	14	330
3,3'-Dichlorobenzidine		91	U	91	670
2,4-Dichlorophenol		10	U	10	330
Diethyl phthalate		26	U	26	330
2,4-Dimethylphenol		67	U	67	330
Dimethyl phthalate		23	U	23	330
Di-n-butyl phthalate		29	U	29	330
4,6-Dinitro-2-methylphenol		330	U	330	670
2,4-Dinitrophenol		340	U	340	840
2,4-Dinitrotoluene		67	U	67	330
2,6-Dinitrotoluene		28	U	28	330
Di-n-octyl phthalate		15	U	15	330
Fluoranthene		120	J	36	330
Fluorene		18	U	18	330
Hexachlorobenzene		29	U	29	330
Hexachlorobutadiene		10	U	10	330
Hexachlorocyclopentadiene		51	U	51	330
Hexachloroethane		22	U	22	330
Indeno[1,2,3-cd]pyrene		22	U	22	330
Isophorone		17	U	17	330
2-Methylnaphthalene		43	J	19	330

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H225

Lab Sample ID: 280-14601-5

Date Sampled: 04/12/2011 0940

Client Matrix: Solid

% Moisture: 1.6

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3420.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	04/25/2011 1439			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	330
3 & 4 Methylphenol		33	U	33	330
Naphthalene		31	U	31	330
2-Nitroaniline		51	U	51	330
3-Nitroaniline		74	U	74	330
4-Nitroaniline		73	U	73	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		10	U	10	330
4-Nitrophenol		98	U	98	670
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	670
Phenanthrene		32	J	17	330
Phenol		18	U	18	330
Pyrene		70	J	12	330
1,2,4-Trichlorobenzene		28	U	28	330
2,4,5-Trichlorophenol		10	U	10	330
2,4,6-Trichlorophenol		10	U	10	330
Surrogate		%Rec	Qualifier	Acceptance Limits	
2-Fluorobiphenyl		76		50 - 120	
2-Fluorophenol		82		53 - 120	
Nitrobenzene-d5		77		50 - 120	
Phenol-d5		78		52 - 120	
Terphenyl-d14		98		55 - 120	
2,4,6-Tribromophenol		82		51 - 120	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H225

Lab Sample ID: 280-14601-5

Date Sampled: 04/12/2011 0940

Client Matrix: Solid

% Moisture: 1.6

Date Received: 04/14/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-63346	Lab File ID:	D3420.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	04/25/2011 1439			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **4**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.75	140	N J
	Unknown	2.86	140	N J
	Unknown	2.93	3100	N J
90-12-0	1-Methylnaphthalene	6.27	23	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H221

Lab Sample ID: 280-14601-1

Date Sampled: 04/12/2011 0915

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-63634	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-62948	Initial Weight/Volume:	31.3 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	04/21/2011 1149			Injection Volume:	1 uL
Prep Date:	04/19/2011 1135			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.7
Aroclor 1221		7.8	U	7.8	16
Aroclor 1232		1.9	U	1.9	9.7
Aroclor 1242		4.5	U	4.5	9.7
Aroclor 1248		4.5	U	4.5	9.7
Aroclor 1254		2.5	U	2.5	9.7
Aroclor 1260		2.5	U	2.5	9.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	96		59 - 130
Tetrachloro-m-xylene	97		53 - 128

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2

Date Sampled: 04/12/2011 0925

Client Matrix: Solid

% Moisture: 1.1

Date Received: 04/14/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-63634	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-62948	Initial Weight/Volume:	31.4 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	04/21/2011 1221			Injection Volume:	1 uL
Prep Date:	04/19/2011 1135			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.7
Aroclor 1221		7.8	U	7.8	16
Aroclor 1232		1.9	U	1.9	9.7
Aroclor 1242		4.5	U	4.5	9.7
Aroclor 1248		4.5	U	4.5	9.7
Aroclor 1254		2.5	U	2.5	9.7
Aroclor 1260		2.5	U	2.5	9.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	96		59 - 130
Tetrachloro-m-xylene	95		53 - 128

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H223

Lab Sample ID: 280-14601-3

Date Sampled: 04/12/2011 0930

Client Matrix: Solid

% Moisture: 5.3

Date Received: 04/14/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-63634	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-62948	Initial Weight/Volume:	31.3 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	04/21/2011 1253			Injection Volume:	1 uL
Prep Date:	04/19/2011 1135			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	10
Aroclor 1221		8.1	U	8.1	17
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.7	U	4.7	10
Aroclor 1248		4.7	U	4.7	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		2.6	U	2.6	10
Surrogate		%Rec	Qualifier	Acceptance Limits	
Decachlorobiphenyl		94		59 - 130	
Tetrachloro-m-xylene		95		53 - 128	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H224

Lab Sample ID: 280-14601-4

Date Sampled: 04/12/2011 0935

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-63634	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-62948	Initial Weight/Volume:	30.2 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	04/21/2011 1325			Injection Volume:	1 uL
Prep Date:	04/19/2011 1135			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	10
Aroclor 1221		8.1	U	8.1	17
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.7	U	4.7	10
Aroclor 1248		4.7	U	4.7	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		2.6	U	2.6	10
Surrogate		%Rec	Qualifier	Acceptance Limits	
Decachlorobiphenyl		102		59 - 130	
Tetrachloro-m-xylene		100		53 - 128	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H225

Lab Sample ID: 280-14601-5

Date Sampled: 04/12/2011 0940

Client Matrix: Solid

% Moisture: 1.6

Date Received: 04/14/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-63634	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-62948	Initial Weight/Volume:	30.5 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	04/21/2011 1357			Injection Volume:	1 uL
Prep Date:	04/19/2011 1135			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U N	2.8	10
Aroclor 1221		8.0	U	8.0	16
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.7	U	4.7	10
Aroclor 1248		4.7	U	4.7	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		22	N	2.6	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	75		59 - 130
Tetrachloro-m-xylene	79		53 - 128

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H221

Lab Sample ID: 280-14601-1

Date Sampled: 04/12/2011 0915

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-64316	Instrument ID:	GCS_U
Prep Method:	3550C	Prep Batch:	280-62862	Lab File ID:	077B7701.D
Dilution:	1.0			Initial Weight/Volume:	33.0 uL
Analysis Date:	04/24/2011 0135			Final Weight/Volume:	1000 uL
Prep Date:	04/18/2011 2240			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		3500	J	920	3700
C10-C28		2300	J	630	3700
Surrogate		%Rec	Qualifier	Acceptance Limits	
o-Terphenyl		82		49 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2

Date Sampled: 04/12/2011 0925

Client Matrix: Solid

% Moisture: 1.1

Date Received: 04/14/2011 0930

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-64316	Instrument ID:	GCS_U
Prep Method:	3550C	Prep Batch:	280-62862	Lab File ID:	080B8001.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	04/24/2011 0259			Final Weight/Volume:	1000 uL
Prep Date:	04/18/2011 2240			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1700	J	1000	4000
C10-C28		990	J	680	4000
Surrogate		%Rec	Qualifier	Acceptance Limits	
o-Terphenyl		72		49 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H223

Lab Sample ID: 280-14601-3

Date Sampled: 04/12/2011 0930

Client Matrix: Solid

% Moisture: 5.3

Date Received: 04/14/2011 0930

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-64316	Instrument ID:	GCS_U
Prep Method:	3550C	Prep Batch:	280-62862	Lab File ID:	081B8101.D
Dilution:	1.0			Initial Weight/Volume:	31.2 g
Analysis Date:	04/24/2011 0327			Final Weight/Volume:	1000 uL
Prep Date:	04/18/2011 2240			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1000	U	1000	4100
C10-C28		690	U	690	4100
Surrogate	%Rec		Qualifier	Acceptance Limits	
o-Terphenyl	77			49 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H224

Lab Sample ID: 280-14601-4

Client Matrix: Solid

% Moisture: 1.5

Date Sampled: 04/12/2011 0935
Date Received: 04/14/2011 0930**NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)**

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-64316	Instrument ID:	GCS_U
Prep Method:	3550C	Prep Batch:	280-62862	Lab File ID:	082B8201.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	04/24/2011 0355			Final Weight/Volume:	1000 uL
Prep Date:	04/18/2011 2240			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1000	U	1000	4000
C10-C28		690	U	690	4000
Surrogate	%Rec		Qualifier	Acceptance Limits	
o-Terphenyl	83			49 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H225

Lab Sample ID: 280-14601-5

Date Sampled: 04/12/2011 0940

Client Matrix: Solid

% Moisture: 1.6

Date Received: 04/14/2011 0930

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-64316	Instrument ID:	GCS_U
Prep Method:	3550C	Prep Batch:	280-62862	Lab File ID:	083B8301.D
Dilution:	1.0			Initial Weight/Volume:	30.8 g
Analysis Date:	04/24/2011 0423			Final Weight/Volume:	1000 uL
Prep Date:	04/18/2011 2240			Injection Volume:	1 uL
Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		39000		990	4000
C10-C28		28000		670	4000
Surrogate		%Rec	Qualifier	Acceptance Limits	
o-Terphenyl		89		49 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H221

Lab Sample ID: 280-14601-1

Date Sampled: 04/12/2011 0915

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-63892	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-62856	Initial Weight/Volume:	30.4 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	04/25/2011 1349			Injection Volume:	20 uL
Prep Date:	04/18/2011 2200			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	100
Acenaphthylene		9.0	U	9.0	100
Anthracene		3.1	U	3.1	20
Benzo[a]anthracene		3.2	U	3.2	15
Benzo[a]pyrene		6.4	U	6.4	15
Benzo[b]fluoranthene		4.2	U	4.2	15
Benzo[g,h,i]perylene		7.2	U	7.2	30
Benzo[k]fluoranthene		3.9	U	3.9	15
Chrysene		4.8	U	4.8	40
Dibenz(a,h)anthracene		11	U	11	30
Fluoranthene		13	U	13	40
Fluorene		5.3	U	5.3	30
Indeno[1,2,3-cd]pyrene		12	U	12	30
Naphthalene		12	U	12	100
Phenanthrene		12	U	12	40
Pyrene		12	U	12	40
Surrogate		%Rec	Qualifier	Acceptance Limits	
Terphenyl-d14 (SUR)		94		72 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2

Date Sampled: 04/12/2011 0925

Client Matrix: Solid

% Moisture: 1.1

Date Received: 04/14/2011 0930

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-63892	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-62856	Initial Weight/Volume:	31.8 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	04/25/2011 1520			Injection Volume:	20 uL
Prep Date:	04/18/2011 2200			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.5	U	9.5	95
Acenaphthylene		8.6	U	8.6	95
Anthracene		2.9	U	2.9	19
Benzo[a]anthracene		3.0	U	3.0	14
Benzo[a]pyrene		6.1	U	6.1	14
Benzo[b]fluoranthene		4.0	U	4.0	14
Benzo[g,h,i]perylene		6.9	U	6.9	29
Benzo[k]fluoranthene		3.8	U	3.8	14
Chrysene		4.6	U	4.6	38
Dibenz(a,h)anthracene		10	U	10	29
Fluoranthene		12	U	12	38
Fluorene		5.0	U	5.0	29
Indeno[1,2,3-cd]pyrene		11	U	11	29
Naphthalene		11	U	11	95
Phenanthrene		11	U	11	38
Pyrene		11	U	11	38
Surrogate					
Terphenyl-d14 (SUR)		%Rec	Qualifier	Acceptance Limits	
		91		72 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H223

Lab Sample ID: 280-14601-3

Date Sampled: 04/12/2011 0930

Client Matrix: Solid

% Moisture: 5.3

Date Received: 04/14/2011 0930

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-63892	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-62856	Initial Weight/Volume:	32.0 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	04/25/2011 1551			Injection Volume:	20 uL
Prep Date:	04/18/2011 2200			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.9	U	9.9	99
Acenaphthylene		8.9	U	8.9	99
Anthracene		3.0	U	3.0	20
Benzo[a]anthracene		3.2	U	3.2	15
Benzo[a]pyrene		6.3	U	6.3	15
Benzo[b]fluoranthene		4.2	U	4.2	15
Benzo[g,h,i]perylene		7.1	U	7.1	30
Benzo[k]fluoranthene		3.9	U	3.9	15
Chrysene		4.8	U	4.8	40
Dibenzo(a,h)anthracene		11	U	11	30
Fluoranthene		13	U	13	40
Fluorene		5.2	U	5.2	30
Indeno[1,2,3-cd]pyrene		12	U	12	30
Naphthalene		12	U	12	99
Phenanthrene		12	U	12	40
Pyrene		12	U	12	40
Surrogate					
Terphenyl-d14 (SUR)		%Rec	Qualifier	Acceptance Limits	
		97		72 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H224

Lab Sample ID: 280-14601-4

Client Matrix: Solid

% Moisture: 1.5

Date Sampled: 04/12/2011 0935
Date Received: 04/14/2011 0930**8310 PAHs (HPLC)**

Analysis Method:	8310	Analysis Batch:	280-63892	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-62856	Initial Weight/Volume:	31.1 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	04/25/2011 1622			Injection Volume:	20 uL
Prep Date:	04/18/2011 2200			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.8	U	9.8	98
Acenaphthylene		8.8	U	8.8	98
Anthracene		3.0	U	3.0	20
Benzo[a]anthracene		3.1	U	3.1	15
Benzo[a]pyrene		6.3	U	6.3	15
Benzo[b]fluoranthene		4.1	U	4.1	15
Benzo[g,h,i]perylene		7.1	U	7.1	29
Benzo[k]fluoranthene		3.9	U	3.9	15
Chrysene		4.7	U	4.7	39
Dibenzo(a,h)anthracene		11	U	11	29
Fluoranthene		13	U	13	39
Fluorene		5.2	U	5.2	29
Indeno[1,2,3-cd]pyrene		12	U	12	29
Naphthalene		12	U	12	98
Phenanthrene		12	U	12	39
Pyrene		12	U	12	39
Surrogate		%Rec	Qualifier	Acceptance Limits	
Terphenyl-d14 (SUR)		95		72 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H225

Lab Sample ID: 280-14601-5

Date Sampled: 04/12/2011 0940

Client Matrix: Solid

% Moisture: 1.6

Date Received: 04/14/2011 0930

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-63892	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-62856	Initial Weight/Volume:	31.3 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	04/25/2011 1652			Injection Volume:	20 uL
Prep Date:	04/18/2011 2200			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.7	U	9.7	97
Acenaphthylene		8.8	U	8.8	97
Anthracene		3.0	U	3.0	19
Benzo[a]anthracene		3.1	U	3.1	15
Benzo[a]pyrene		56		6.2	15
Benzo[b]fluoranthene		41	X	4.1	15
Benzo[g,h,i]perylene		13	J	7.0	29
Benzo[k]fluoranthene		18		3.8	15
Chrysene		53		4.7	39
Dibeno(a,h)anthracene		11	U	11	29
Fluoranthene		96		13	39
Fluorene		5.1	U	5.1	29
Indeno[1,2,3-cd]pyrene		12	U	12	29
Naphthalene		12	U	12	97
Phenanthrene		40	X	12	39
Pyrene		87	X	12	39
Surrogate		%Rec	Qualifier	Acceptance Limits	
Terphenyl-d14 (SUR)		90		72 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H221

Lab Sample ID: 280-14601-1

Date Sampled: 04/12/2011 0915

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-63593	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-62837	Lab File ID:	26b042111.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	04/22/2011 0203			Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.6		0.64	0.97
Barium		46.0		0.073	0.48
Beryllium		0.032	U	0.032	0.19
Boron		2.4	N M	0.95	1.9
Calcium		10800		13.6	48.3
Chromium		10.7	X	0.056	0.19
Copper		18.4		0.21	0.97
Lead		5.5	M	0.26	0.48
Molybdenum		0.49	B	0.25	1.9
Nickel		10.6	X	0.12	3.9
Selenium		0.83	U	0.83	0.97
Silicon		203		5.5	9.7
Vanadium		41.5	X	0.091	1.9
Zinc		55.3	X	0.38	0.97

Analysis Method:	6010B	Analysis Batch:	280-63885	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-62837	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	04/22/2011 1339			Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5800		1.5	4.8
Antimony		0.37	U	0.37	0.58
Cobalt		5.9		0.097	0.97
Iron		16500		3.7	4.8
Magnesium		4320		3.6	19.3
Manganese		251		0.097	0.97
Potassium		986		39.6	290
Silver		0.39		0.15	0.19
Sodium		318		57.0	116

Analysis Method:	6010B	Analysis Batch:	280-64247	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-63915	Lab File ID:	25A4042611.asc
Dilution:	1.0			Initial Weight/Volume:	1.10 g
Analysis Date:	04/26/2011 2121			Final Weight/Volume:	100 mL
Prep Date:	04/25/2011 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Cadmium		0.18		0.038	0.18

7471A Mercury (CVAA)

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H221

Lab Sample ID: 280-14601-1

Date Sampled: 04/12/2011 0915

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-62894	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-62351	Lab File ID:	110418AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.67 g
Analysis Date:	04/18/2011 1302			Final Weight/Volume:	50 mL
Prep Date:	04/18/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0070	B	0.0050	0.015

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2

Date Sampled: 04/12/2011 0925

Client Matrix: Solid

% Moisture: 1.1

Date Received: 04/14/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-63593	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-62837	Lab File ID:	26b042111.asc
Dilution:	1.0			Initial Weight/Volume:	1.19 g
Analysis Date:	04/22/2011 0212			Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.5		0.56	0.85
Barium		73.0		0.065	0.43
Beryllium		0.12	B	0.028	0.17
Boron		1.4	B	0.83	1.7
Calcium		5510		12.0	42.5
Chromium		12.5	X	0.049	0.17
Copper		15.8		0.18	0.85
Lead		4.0		0.23	0.43
Molybdenum		0.22	U	0.22	1.7
Nickel		10.8	X	0.10	3.4
Selenium		0.73	U	0.73	0.85
Silicon		257		4.8	8.5
Vanadium		38.9	X	0.080	1.7
Zinc		33.3	X	0.34	0.85

Analysis Method:	6010B	Analysis Batch:	280-63885	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-62837	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.19 g
Analysis Date:	04/22/2011 1348			Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7870		1.3	4.3
Antimony		0.32	U	0.32	0.51
Cobalt		6.0		0.085	0.85
Iron		16500		3.2	4.3
Magnesium		3910		3.1	17.0
Manganese		270		0.085	0.85
Potassium		1360		34.9	255
Silver		0.14	U	0.14	0.17
Sodium		256		50.2	102

Analysis Method:	6010B	Analysis Batch:	280-64247	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-63915	Lab File ID:	25A4042611.asc
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	04/26/2011 2131			Final Weight/Volume:	100 mL
Prep Date:	04/25/2011 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Cadmium		0.098	B	0.037	0.18

7471A Mercury (CVAA)

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2

Date Sampled: 04/12/2011 0925

Client Matrix: Solid

% Moisture: 1.1

Date Received: 04/14/2011 0930

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-62894	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-62351	Lab File ID:	110418AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	04/18/2011 1304			Final Weight/Volume:	50 mL
Prep Date:	04/18/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0053	U	0.0053	0.016

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Client Sample ID: J1H223

Lab Sample ID: 280-14601-3

Date Sampled: 04/12/2011 0930

Client Matrix: Solid

% Moisture: 5.3

Date Received: 04/14/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-63593	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-62837	Lab File ID:	26b042111.asc
Dilution:	1.0			Initial Weight/Volume:	1.06 g
Analysis Date:	04/22/2011 0215			Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		3.1		0.66	1.0
Barium		46.6		0.076	0.50
Beryllium		0.065	B	0.033	0.20
Boron		1.6	B	0.98	2.0
Calcium		13800		14.0	49.8
Chromium		11.8	X	0.058	0.20
Copper		17.4		0.22	1.0
Lead		3.4		0.27	0.50
Molybdenum		0.26	U	0.26	2.0
Nickel		10.9	X	0.12	4.0
Selenium		0.86	U	0.86	1.0
Silicon		253		5.6	10
Vanadium		42.7	X	0.094	2.0
Zinc		33.8	X	0.40	1.0

Analysis Method:	6010B	Analysis Batch:	280-63885	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-62837	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.06 g
Analysis Date:	04/22/2011 1350			Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6510		1.5	5.0
Antimony		0.38	U	0.38	0.60
Cobalt		6.2		0.10	1.0
Iron		16800		3.8	5.0
Magnesium		5050		3.7	19.9
Manganese		263		0.10	1.0
Potassium		993		40.8	299
Silver		0.16	U	0.16	0.20
Sodium		1310		58.8	120

Analysis Method:	6010B	Analysis Batch:	280-64247	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-63915	Lab File ID:	25A4042611.asc
Dilution:	1.0			Initial Weight/Volume:	1.08 g
Analysis Date:	04/26/2011 2133			Final Weight/Volume:	100 mL
Prep Date:	04/25/2011 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Cadmium		0.089	B	0.040	0.20

7471A Mercury (CVAA)

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076Client Sample ID: **J1H223**

Lab Sample ID: 280-14601-3

Date Sampled: 04/12/2011 0930

Client Matrix: Solid

% Moisture: 5.3

Date Received: 04/14/2011 0930

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-62894	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-62351	Lab File ID:	110418AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	04/18/2011 1306			Final Weight/Volume:	50 mL
Prep Date:	04/18/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0056	U	0.0056	0.017

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H224

Lab Sample ID: 280-14601-4

Date Sampled: 04/12/2011 0935

Client Matrix: Solid

% Moisture: 1.5

Date Received: 04/14/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-63593	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-62837	Lab File ID:	26b042111.asc
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	04/22/2011 0217			Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.5		0.59	0.90
Barium		57.0		0.068	0.45
Beryllium		0.10	B	0.030	0.18
Boron		1.3	B	0.88	1.8
Calcium		7150		12.7	44.9
Chromium		13.1	X	0.052	0.18
Copper		15.4		0.20	0.90
Lead		2.6		0.24	0.45
Molybdenum		0.23	U	0.23	1.8
Nickel		11.3	X	0.11	3.6
Selenium		0.77	U	0.77	0.90
Silicon		202		5.1	9.0
Vanadium		31.9	X	0.084	1.8
Zinc		28.5	X	0.36	0.90

Analysis Method:	6010B	Analysis Batch:	280-63885	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-62837	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	04/22/2011 1353			Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6310		1.4	4.5
Antimony		0.34	U	0.34	0.54
Cobalt		5.0		0.090	0.90
Iron		13200		3.4	4.5
Magnesium		4430		3.3	18.0
Manganese		252		0.090	0.90
Potassium		991		36.8	270
Silver		0.14	U	0.14	0.18
Sodium		476		53.0	108

Analysis Method:	6010B	Analysis Batch:	280-64247	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-63915	Lab File ID:	25A4042611.asc
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	04/26/2011 2135			Final Weight/Volume:	100 mL
Prep Date:	04/25/2011 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Cadmium		0.099	B	0.037	0.18

7471A Mercury (CVAA)

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H224

Lab Sample ID: 280-14601-4

Date Sampled: 04/12/2011 0935

Client Matrix: Solid

Date Received: 04/14/2011 0930

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-62894	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-62351	Lab File ID:	110418AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.67 g
Analysis Date:	04/18/2011 1313			Final Weight/Volume:	50 mL
Prep Date:	04/18/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0050	U	0.0050	0.015

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Client Sample ID: J1H225

Lab Sample ID: 280-14601-5
Client Matrix: Solid

% Moisture: 1.6

Date Sampled: 04/12/2011 0940
Date Received: 04/14/2011 0930**6010B Metals (ICP)**

Analysis Method:	6010B	Analysis Batch:	280-64247	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-63915	Lab File ID:	25A4042611.asc
Dilution:	1.0			Initial Weight/Volume:	1.18 g
Analysis Date:	04/26/2011 2138			Final Weight/Volume:	100 mL
Prep Date:	04/25/2011 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Cadmium		0.19		0.035	0.17

Analysis Method:	6010B	Analysis Batch:	280-63885	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-62837	Lab File ID:	N/A
Dilution:	2.0			Initial Weight/Volume:	1.10 g
Analysis Date:	04/22/2011 1355			Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7020		2.9	9.2
Antimony		0.70	U	0.70	1.1
Arsenic		2.6		1.2	1.8
Barium		55.9		0.14	0.92
Beryllium		0.061	U	0.061	0.37
Boron		1.8	U	1.8	3.7
Calcium		8230		26.0	92.4
Chromium		28.6	X	0.11	0.37
Cobalt		7.3		0.18	1.8
Copper		32.9		0.40	1.8
Iron		18800		7.0	9.2
Lead		20.1		0.50	0.92
Magnesium		4900		6.8	36.9
Manganese		300		0.18	1.8
Molybdenum		0.48	U	0.48	3.7
Nickel		25.3	X	0.23	7.4
Potassium		1070		75.7	554
Selenium		1.6	U	1.6	1.8
Silicon		257		10.5	18.5
Silver		0.30	U	0.30	0.37
Sodium		360		109	222
Vanadium		59.2	X	0.17	3.7
Zinc		64.6	X	0.74	1.8

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-62894	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-62351	Lab File ID:	110418AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	04/18/2011 1316			Final Weight/Volume:	50 mL
Prep Date:	04/18/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.014	B	0.0054	0.017

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076**General Chemistry**Client Sample ID: **J1H221**

Lab Sample ID: 280-14601-1

Date Sampled: 04/12/2011 0915

Client Matrix: Solid

Date Received: 04/14/2011 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	1.5	%		0.10	0.10	1.0	D-2216

Analysis Batch: 280-62407

Analysis Date: 04/15/2011 0928

DryWt Corrected: N

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076**General Chemistry**

Client Sample ID: J1H222

Lab Sample ID: 280-14601-2

Client Matrix: Solid

Date Sampled: 04/12/2011 0925

Date Received: 04/14/2011 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	1.1		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-62407 Analysis Date: 04/15/2011 0928

DryWt Corrected: N

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

General Chemistry**Client Sample ID:** J1H223

Lab Sample ID: 280-14601-3

Date Sampled: 04/12/2011 0930

Client Matrix: Solid

Date Received: 04/14/2011 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	5.3		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-62407 Analysis Date: 04/15/2011 0928

DryWt Corrected: N

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076**General Chemistry**Client Sample ID: **J1H224**Lab Sample ID: **280-14601-4**Client Matrix: **Solid**

Date Sampled: 04/12/2011 0935

Date Received: 04/14/2011 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	1.5	%	%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-62407 Analysis Date: 04/15/2011 0928

DryWt Corrected: N

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076**General Chemistry****Client Sample ID:** J1H225

Lab Sample ID: 280-14601-5

Client Matrix: Solid

Date Sampled: 04/12/2011 0940

Date Received: 04/14/2011 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	1.6		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-62407 Analysis Date: 04/15/2011 0928

DryWt Corrected: N

QUALITY CONTROL RESULTS

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 280-62448					
LCS 280-62448/2-A	Lab Control Sample	T	Solid	5030B	
MB 280-62448/1-A	Method Blank	T	Solid	5030B	
280-14601-1	J1H221	T	Solid	5030B	
280-14601-2	J1H222	T	Solid	5030B	
280-14601-3	J1H223	T	Solid	5030B	
280-14601-4	J1H224	T	Solid	5030B	
280-14601-5	J1H225	T	Solid	5030B	
280-14601-5MS	Matrix Spike	T	Solid	5030B	
280-14601-5MSD	Matrix Spike Duplicate	T	Solid	5030B	
Analysis Batch: 280-62623					
LCS 280-62448/2-A	Lab Control Sample	T	Solid	8260B	280-62448
MB 280-62448/1-A	Method Blank	T	Solid	8260B	280-62448
280-14601-1	J1H221	T	Solid	8260B	280-62448
280-14601-2	J1H222	T	Solid	8260B	280-62448
280-14601-3	J1H223	T	Solid	8260B	280-62448
280-14601-4	J1H224	T	Solid	8260B	280-62448
280-14601-5	J1H225	T	Solid	8260B	280-62448
280-14601-5MS	Matrix Spike	T	Solid	8260B	280-62448
280-14601-5MSD	Matrix Spike Duplicate	T	Solid	8260B	280-62448

Report Basis

T = Total

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-63346					
LCS 280-63346/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-63346/1-A	Method Blank	T	Solid	3550C	
280-14601-1	J1H221	T	Solid	3550C	
280-14601-1MS	Matrix Spike	T	Solid	3550C	
280-14601-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-14601-2	J1H222	T	Solid	3550C	
280-14601-3	J1H223	T	Solid	3550C	
280-14601-4	J1H224	T	Solid	3550C	
280-14601-5	J1H225	T	Solid	3550C	
Analysis Batch: 280-64085					
LCS 280-63346/2-A	Lab Control Sample	T	Solid	8270C	280-63346
MB 280-63346/1-A	Method Blank	T	Solid	8270C	280-63346
280-14601-1	J1H221	T	Solid	8270C	280-63346
280-14601-1MS	Matrix Spike	T	Solid	8270C	280-63346
280-14601-1MSD	Matrix Spike Duplicate	T	Solid	8270C	280-63346
280-14601-2	J1H222	T	Solid	8270C	280-63346
280-14601-3	J1H223	T	Solid	8270C	280-63346
280-14601-4	J1H224	T	Solid	8270C	280-63346
280-14601-5	J1H225	T	Solid	8270C	280-63346

Report Basis

T = Total

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-62862					
LCS 280-62862/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-62862/1-A	Method Blank	T	Solid	3550C	
280-14601-1	J1H221	T	Solid	3550C	
280-14601-1MS	Matrix Spike	T	Solid	3550C	
280-14601-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-14601-2	J1H222	T	Solid	3550C	
280-14601-3	J1H223	T	Solid	3550C	
280-14601-4	J1H224	T	Solid	3550C	
280-14601-5	J1H225	T	Solid	3550C	
Prep Batch: 280-62948					
LCS 280-62948/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-62948/1-A	Method Blank	T	Solid	3550C	
280-14601-1	J1H221	T	Solid	3550C	
280-14601-2	J1H222	T	Solid	3550C	
280-14601-3	J1H223	T	Solid	3550C	
280-14601-4	J1H224	T	Solid	3550C	
280-14601-5	J1H225	T	Solid	3550C	
280-14601-5MS	Matrix Spike	T	Solid	3550C	
280-14601-5MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-63634					
LCS 280-62948/2-A	Lab Control Sample	T	Solid	8082	280-62948
MB 280-62948/1-A	Method Blank	T	Solid	8082	280-62948
280-14601-1	J1H221	T	Solid	8082	280-62948
280-14601-2	J1H222	T	Solid	8082	280-62948
280-14601-3	J1H223	T	Solid	8082	280-62948
280-14601-4	J1H224	T	Solid	8082	280-62948
280-14601-5	J1H225	T	Solid	8082	280-62948
280-14601-5MS	Matrix Spike	T	Solid	8082	280-62948
280-14601-5MSD	Matrix Spike Duplicate	T	Solid	8082	280-62948
Analysis Batch:280-64316					
LCS 280-62862/2-A	Lab Control Sample	T	Solid	NWTPH-Dx	280-62862
MB 280-62862/1-A	Method Blank	T	Solid	NWTPH-Dx	280-62862
280-14601-1	J1H221	T	Solid	NWTPH-Dx	280-62862
280-14601-1MS	Matrix Spike	T	Solid	NWTPH-Dx	280-62862
280-14601-1MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-62862
280-14601-2	J1H222	T	Solid	NWTPH-Dx	280-62862
280-14601-3	J1H223	T	Solid	NWTPH-Dx	280-62862
280-14601-4	J1H224	T	Solid	NWTPH-Dx	280-62862
280-14601-5	J1H225	T	Solid	NWTPH-Dx	280-62862

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
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Report Basis

T = Total

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-62351					
LCS 280-62351/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-62351/1-A	Method Blank	T	Solid	7471A	
280-14601-1	J1H221	T	Solid	7471A	
280-14601-2	J1H222	T	Solid	7471A	
280-14601-3	J1H223	T	Solid	7471A	
280-14601-3DU	Duplicate	T	Solid	7471A	
280-14601-3MS	Matrix Spike	T	Solid	7471A	
280-14601-4	J1H224	T	Solid	7471A	
280-14601-5	J1H225	T	Solid	7471A	
Prep Batch: 280-62837					
LCS 280-62837/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-62837/1-A	Method Blank	T	Solid	3050B	
280-14601-1	J1H221	T	Solid	3050B	
280-14601-1DU	Duplicate	T	Solid	3050B	
280-14601-1MS	Matrix Spike	T	Solid	3050B	
280-14601-2	J1H222	T	Solid	3050B	
280-14601-3	J1H223	T	Solid	3050B	
280-14601-4	J1H224	T	Solid	3050B	
280-14601-5	J1H225	T	Solid	3050B	
Analysis Batch:280-62894					
LCS 280-62351/2-A	Lab Control Sample	T	Solid	7471A	280-62351
MB 280-62351/1-A	Method Blank	T	Solid	7471A	280-62351
280-14601-1	J1H221	T	Solid	7471A	280-62351
280-14601-2	J1H222	T	Solid	7471A	280-62351
280-14601-3	J1H223	T	Solid	7471A	280-62351
280-14601-3DU	Duplicate	T	Solid	7471A	280-62351
280-14601-3MS	Matrix Spike	T	Solid	7471A	280-62351
280-14601-4	J1H224	T	Solid	7471A	280-62351
280-14601-5	J1H225	T	Solid	7471A	280-62351
Analysis Batch:280-63593					
LCS 280-62837/2-A	Lab Control Sample	T	Solid	6010B	280-62837
MB 280-62837/1-A	Method Blank	T	Solid	6010B	280-62837
280-14601-1	J1H221	T	Solid	6010B	280-62837
280-14601-1DU	Duplicate	T	Solid	6010B	280-62837
280-14601-1MS	Matrix Spike	T	Solid	6010B	280-62837
280-14601-2	J1H222	T	Solid	6010B	280-62837
280-14601-3	J1H223	T	Solid	6010B	280-62837
280-14601-4	J1H224	T	Solid	6010B	280-62837

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-63885					
LCS 280-62837/2-A	Lab Control Sample	T	Solid	6010B	280-62837
MB 280-62837/1-A	Method Blank	T	Solid	6010B	280-62837
280-14601-1	J1H221	T	Solid	6010B	280-62837
280-14601-1DU	Duplicate	T	Solid	6010B	280-62837
280-14601-1MS	Matrix Spike	T	Solid	6010B	280-62837
280-14601-2	J1H222	T	Solid	6010B	280-62837
280-14601-3	J1H223	T	Solid	6010B	280-62837
280-14601-4	J1H224	T	Solid	6010B	280-62837
280-14601-5	J1H225	T	Solid	6010B	280-62837
Prep Batch: 280-63915					
LCS 280-63915/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-63915/1-A	Method Blank	T	Solid	3050B	
280-14601-1	J1H221	T	Solid	3050B	
280-14601-1DU	Duplicate	T	Solid	3050B	
280-14601-1MS	Matrix Spike	T	Solid	3050B	
280-14601-2	J1H222	T	Solid	3050B	
280-14601-3	J1H223	T	Solid	3050B	
280-14601-4	J1H224	T	Solid	3050B	
280-14601-5	J1H225	T	Solid	3050B	
Analysis Batch:280-64247					
LCS 280-63915/2-A	Lab Control Sample	T	Solid	6010B	280-63915
MB 280-63915/1-A	Method Blank	T	Solid	6010B	280-63915
280-14601-1	J1H221	T	Solid	6010B	280-63915
280-14601-1DU	Duplicate	T	Solid	6010B	280-63915
280-14601-1MS	Matrix Spike	T	Solid	6010B	280-63915
280-14601-2	J1H222	T	Solid	6010B	280-63915
280-14601-3	J1H223	T	Solid	6010B	280-63915
280-14601-4	J1H224	T	Solid	6010B	280-63915
280-14601-5	J1H225	T	Solid	6010B	280-63915

Report Basis

T = Total

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
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General Chemistry

Analysis Batch:280-62407

280-14601-1	J1H221	T	Solid	D-2216
280-14601-1DU	Duplicate	T	Solid	D-2216
280-14601-2	J1H222	T	Solid	D-2216
280-14601-3	J1H223	T	Solid	D-2216
280-14601-4	J1H224	T	Solid	D-2216
280-14601-5	J1H225	T	Solid	D-2216

Report Basis

T = Total

HPLC/IC

Prep Batch: 280-62856

LCS 280-62856/2-A	Lab Control Sample	T	Solid	3550C
MB 280-62856/1-A	Method Blank	T	Solid	3550C
280-14601-1	J1H221	T	Solid	3550C
280-14601-1MS	Matrix Spike	T	Solid	3550C
280-14601-1MSD	Matrix Spike Duplicate	T	Solid	3550C
280-14601-2	J1H222	T	Solid	3550C
280-14601-3	J1H223	T	Solid	3550C
280-14601-4	J1H224	T	Solid	3550C
280-14601-5	J1H225	T	Solid	3550C

Analysis Batch:280-63892

LCS 280-62856/2-A	Lab Control Sample	T	Solid	8310	280-62856
MB 280-62856/1-A	Method Blank	T	Solid	8310	280-62856
280-14601-1	J1H221	T	Solid	8310	280-62856
280-14601-1MS	Matrix Spike	T	Solid	8310	280-62856
280-14601-1MSD	Matrix Spike Duplicate	T	Solid	8310	280-62856
280-14601-2	J1H222	T	Solid	8310	280-62856
280-14601-3	J1H223	T	Solid	8310	280-62856
280-14601-4	J1H224	T	Solid	8310	280-62856
280-14601-5	J1H225	T	Solid	8310	280-62856

Report Basis

T = Total

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Method Blank - Batch: 280-62448

Method: 8260B

Preparation: 5030B

Lab Sample ID:	MB 280-62448/1-A	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Client Matrix:	Solid	Prep Batch:	280-62448	Lab File ID:	G4486.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	04/15/2011 1008	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	5.79	J	5.4	20
Benzene	0.47	U	0.47	5.0
Bromodichloromethane	0.22	U	0.22	5.0
Bromoform	0.23	U	0.23	5.0
Bromomethane	0.50	U	0.50	10
2-Butanone (MEK)	1.8	U	1.8	10
Carbon disulfide	0.42	U	0.42	5.0
Carbon tetrachloride	0.63	U	0.63	5.0
Chlorobenzene	0.54	U	0.54	5.0
Dibromochloromethane	0.57	U	0.57	5.0
Chloroethane	0.89	U	0.89	10
Chloroform	0.29	U	0.29	5.0
Chloromethane	0.77	U	0.77	10
1,3-Dichlorobenzene	0.48	U	0.48	5.0
1,1-Dichloroethane	0.21	U	0.21	5.0
1,2-Dichloroethane	0.70	U	0.70	5.0
trans-1,2-Dichloroethene	0.39	U	0.39	2.5
1,1-Dichloroethene	0.59	U	0.59	5.0
1,2-Dichloroethene, Total	0.39	U	0.39	5.0
1,2-Dichloropropane	0.55	U	0.55	5.0
cis-1,3-Dichloropropene	1.3	U	1.3	5.0
trans-1,3-Dichloropropene	0.67	U	0.67	5.0
Ethylbenzene	0.67	U	0.67	5.0
2-Hexanone	4.9	U	4.9	20
Methylene Chloride	4.12	J	0.75	5.0
4-Methyl-2-pentanone (MIBK)	4.4	U	4.4	10
Styrene	0.63	U	0.63	5.0
1,1,2,2-Tetrachloroethane	0.61	U	0.61	5.0
Tetrachloroethene	0.59	U	0.59	5.0
Toluene	0.69	U	0.69	5.0
1,1,1-Trichloroethane	0.52	U	0.52	5.0
1,1,2-Trichloroethane	0.88	U	0.88	5.0
Trichloroethene	0.23	U	0.23	5.0
Vinyl chloride	1.3	U	1.3	5.0
Xylenes, Total	0.61	U	0.61	5.0
Surrogate	% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	88		58 - 140	
Toluene-d8 (Surr)	108		80 - 126	
4-Bromofluorobenzene (Surr)	98		76 - 127	
Dibromofluoromethane (Surr)	99		75 - 121	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Method Blank TICs- Batch: 280-62448

Cas Number	Analyte	RT	Est. Result	Qual
60-29-7	Ethyl ether	5.37	1.08	J J N
91-20-3	Naphthalene	15.73	0.684	J J N
	Tentatively Identified Compound		None	

Lab Control Sample - Batch: 280-62448

Method: 8260B

Preparation: 5030B

Lab Sample ID:	LCS 280-62448/2-A	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Client Matrix:	Solid	Prep Batch:	280-62448	Lab File ID:	G4485.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	04/15/2011 0946	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	50.0	54.9	110	76 - 120	
Bromodichloromethane	50.0	54.1	108	74 - 125	
Carbon tetrachloride	50.0	58.1	116	69 - 147	
Chlorobenzene	50.0	52.7	105	74 - 120	
Chloroform	50.0	53.8	108	77 - 125	
1,3-Dichlorobenzene	50.0	53.5	107	74 - 120	
1,1-Dichloroethane	50.0	52.3	105	74 - 120	
trans-1,2-Dichloroethene	50.0	57.1	114	80 - 127	
1,1-Dichloroethene	50.0	58.9	118	77 - 143	
1,2-Dichloropropane	50.0	50.3	101	74 - 120	
Ethylbenzene	50.0	54.6	109	78 - 120	
Methylene Chloride	50.0	53.2	106	76 - 137	
Tetrachloroethene	50.0	57.0	114	71 - 120	
Toluene	50.0	53.9	108	72 - 120	
1,1,1-Trichloroethane	50.0	55.5	111	67 - 143	
Trichloroethene	50.0	55.0	110	78 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91	58 - 140
Toluene-d8 (Surr)	108	80 - 126
4-Bromofluorobenzene (Surr)	99	76 - 127
Dibromofluoromethane (Surr)	98	75 - 121

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-62448
Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	280-14601-5	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Client Matrix:	Solid	Prep Batch:	280-62448	Lab File ID:	G4499.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.555 g
Analysis Date:	04/15/2011 1602			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				
Leach Date:	N/A				

MSD Lab Sample ID:	280-14601-5	Analysis Batch:	280-62623	Instrument ID:	MSV_G
Client Matrix:	Solid	Prep Batch:	280-62448	Lab File ID:	G4500.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.514 g
Analysis Date:	04/15/2011 1623			Final Weight/Volume:	5 mL
Prep Date:	04/15/2011 0600				
Leach Date:	N/A				

Analyte	% Rec.		RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD				
Benzene	76	77	76 - 120	2	20	
Bromodichloromethane	80	82	74 - 125	3	20	
Carbon tetrachloride	86	91	69 - 147	7	20	
Chlorobenzene	64	61	74 - 120	4	20	T
Chloroform	88	89	77 - 125	3	20	
1,3-Dichlorobenzene	59	50	74 - 120	16	20	T
1,1-Dichloroethane	81	81	74 - 120	0	20	
trans-1,2-Dichloroethene	76	78	80 - 127	4	20	T
1,1-Dichloroethene	85	90	77 - 143	6	20	
1,2-Dichloropropane	71	75	74 - 120	6	20	T
Ethylbenzene	75	71	78 - 120	5	20	T
Methylene Chloride	80	82	76 - 137	3	21	
Tetrachloroethene	81	82	71 - 120	3	20	
Toluene	72	71	72 - 120	1	20	T
1,1,1-Trichloroethane	77	88	67 - 143	13	20	
Trichloroethene	80	83	78 - 120	4	20	
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	87		98		58 - 140	
Toluene-d8 (Surr)	99		114		80 - 126	
4-Bromofluorobenzene (Surr)	94		101		76 - 127	
Dibromofluoromethane (Surr)	85		106		75 - 121	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Method Blank - Batch: 280-63346

Method: 8270C

Preparation: 3550C

Lab Sample ID:	MB 280-63346/1-A	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Client Matrix:	Solid	Prep Batch:	280-63346	Lab File ID:	D3415.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 uL
Analysis Date:	04/25/2011 1303	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	10	U	10	330
Acenaphthylene	17	U	17	330
Anthracene	17	U	17	330
Benzo[a]anthracene	20	U	20	330
Benzo[a]pyrene	20	U	20	330
Benzo[b]fluoranthene	26	U	26	330
Benzo[ghi]perylene	16	U	16	330
Benzo[k]fluoranthene	40	U	40	330
Bis(2-chloroethoxy)methane	23	U	23	330
Bis(2-chloroethyl)ether	17	U	17	330
bis (2-chloroisopropyl) ether	23	U	23	330
Bis(2-ethylhexyl) phthalate	46	U	46	330
4-Bromophenyl phenyl ether	19	U	19	330
Butyl benzyl phthalate	43	U	43	330
Carbazole	36	U	36	330
4-Chloroaniline	82	U	82	330
4-Chloro-3-methylphenol	66	U	66	330
2-Chloronaphthalene	10	U	10	330
2-Chlorophenol	21	U	21	330
4-Chlorophenyl phenyl ether	21	U	21	330
Chrysene	27	U	27	330
Dibenz(a,h)anthracene	19	U	19	330
Dibenzofuran	20	U	20	330
1,2-Dichlorobenzene	22	U	22	330
1,3-Dichlorobenzene	12	U	12	330
1,4-Dichlorobenzene	14	U	14	330
3,3'-Dichlorobenzidine	90	U	90	660
2,4-Dichlorophenol	10	U	10	330
Diethyl phthalate	26	U	26	330
2,4-Dimethylphenol	66	U	66	330
Dimethyl phthalate	23	U	23	330
Di-n-butyl phthalate	29	U	29	330
4,6-Dinitro-2-methylphenol	330	U	330	660
2,4-Dinitrophenol	330	U	330	830
2,4-Dinitrotoluene	66	U	66	330
2,6-Dinitrotoluene	28	U	28	330
Di-n-octyl phthalate	14	U	14	330
Fluoranthene	36	U	36	330
Fluorene	18	U	18	330
Hexachlorobenzene	29	U	29	330
Hexachlorobutadiene	10	U	10	330
Hexachlorocyclopentadiene	50	U	50	330
Hexachloroethane	21	U	21	330
Indeno[1,2,3-cd]pyrene	22	U	22	330
Isophorone	17	U	17	330

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Method Blank - Batch: 280-63346**Method: 8270C****Preparation: 3550C**

Lab Sample ID:	MB 280-63346/1-A	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Client Matrix:	Solid	Prep Batch:	280-63346	Lab File ID:	D3415.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 g
Analysis Date:	04/25/2011 1303	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2-Methylnaphthalene	19	U	19	330
2-Methylphenol	13	U	13	330
3 & 4 Methylphenol	33	U	33	330
Naphthalene	31	U	31	330
2-Nitroaniline	50	U	50	330
3-Nitroaniline	73	U	73	330
4-Nitroaniline	73	U	73	330
Nitrobenzene	22	U	22	330
2-Nitrophenol	10	U	10	330
4-Nitrophenol	97	U	97	660
N-Nitrosodi-n-propylamine	31	U	31	330
N-Nitrosodiphenylamine	21	U	21	330
Pentachlorophenol	330	U	330	660
Phenanthrene	17	U	17	330
Phenol	18	U	18	330
Pyrene	12	U	12	330
1,2,4-Trichlorobenzene	28	U	28	330
2,4,5-Trichlorophenol	10	U	10	330
2,4,6-Trichlorophenol	10	U	10	330
Surrogate	% Rec	Acceptance Limits		
2-Fluorobiphenyl	81	50 - 120		
2-Fluorophenol	79	53 - 120		
Nitrobenzene-d5	79	50 - 120		
Phenol-d5	77	52 - 120		
Terphenyl-d14	102	55 - 120		
2,4,6-Tribromophenol	88	51 - 120		

Method Blank TICs- Batch: 280-63346

Cas Number	Analyte	RT	Est. Result	Qual
	Unknown	2.92	2660	N J
	Unknown	2.54	609	N J

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Lab Control Sample - Batch: 280-63346

Method: 8270C

Preparation: 3550C

Lab Sample ID:	LCS 280-63346/2-A	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Client Matrix:	Solid	Prep Batch:	280-63346	Lab File ID:	D3400.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.4 g
Analysis Date:	04/25/2011 0825	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	2630	2120	80	52 - 120	
Anthracene	2630	1960	75	57 - 120	
Carbazole	2630	2170	82	54 - 120	
4-Chloro-3-methylphenol	2630	2130	81	57 - 120	
2-Chlorophenol	2630	1930	73	53 - 120	
1,4-Dichlorobenzene	2630	1850	70	46 - 120	
2,4-Dinitrotoluene	2630	2200	84	53 - 120	
2-Methylnaphthalene	2630	1830	69	55 - 120	
2-Methylphenol	2630	1930	73	51 - 120	
4-Nitrophenol	2630	2430	92	41 - 120	
N-Nitrosodi-n-propylamine	2630	1930	73	51 - 120	
Pentachlorophenol	2630	2220	85	30 - 120	
Phenol	2630	1940	74	54 - 120	
Pyrene	2630	2330	89	50 - 120	
1,2,4-Trichlorobenzene	2630	1870	71	50 - 120	
2,4,6-Trichlorophenol	2630	2010	76	50 - 120	
Surrogate		% Rec		Acceptance Limits	
2-Fluorobiphenyl		77		50 - 120	
2-Fluorophenol		80		53 - 120	
Nitrobenzene-d5		74		50 - 120	
Phenol-d5		77		52 - 120	
Terphenyl-d14		92		55 - 120	
2,4,6-Tribromophenol		89		51 - 120	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-63346**

**Method: 8270C
Preparation: 3550C**

MS Lab Sample ID:	280-14601-1	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Client Matrix:	Solid	Prep Batch:	280-63346	Lab File ID:	D3401.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 uL
Analysis Date:	04/25/2011 0844			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-14601-1	Analysis Batch:	280-64085	Instrument ID:	MSS_D
Client Matrix:	Solid	Prep Batch:	280-63346	Lab File ID:	D3402.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.4 g
Analysis Date:	04/25/2011 0904			Final Weight/Volume:	1000 uL
Prep Date:	04/21/2011 1020			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec.		RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD				
Acenaphthene	71	79	52 - 120	10	30	
Anthracene	69	75	57 - 120	7	30	
Carbazole	75	83	54 - 120	10	30	
4-Chloro-3-methylphenol	73	86	57 - 120	16	30	
2-Chlorophenol	68	75	53 - 120	10	30	
1,4-Dichlorobenzene	65	76	46 - 120	15	30	
2,4-Dinitrotoluene	79	89	53 - 120	11	30	
2-Methylnaphthalene	63	75	55 - 120	17	30	
2-Methylphenol	65	77	51 - 120	17	30	
4-Nitrophenol	76	87	41 - 120	14	30	
N-Nitrosodi-n-propylamine	67	78	51 - 120	15	30	
Pentachlorophenol	69	76	30 - 120	10	30	
Phenol	65	78	54 - 120	18	30	
Pyrene	81	88	50 - 120	8	38	
1,2,4-Trichlorobenzene	62	72	50 - 120	14	30	
2,4,6-Trichlorophenol	68	72	50 - 120	5	30	
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits	
2-Fluorobiphenyl	69		76		50 - 120	
2-Fluorophenol	70		79		53 - 120	
Nitrobenzene-d5	69		74		50 - 120	
Phenol-d5	69		74		52 - 120	
Terphenyl-d14	85		90		55 - 120	
2,4,6-Tribromophenol	79		87		51 - 120	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Method Blank - Batch: 280-62948**Method: 8082****Preparation: 3550C**

Lab Sample ID:	MB 280-62948/1-A	Analysis Batch:	280-63634	Instrument ID:	GCS_W
Client Matrix:	Solid	Prep Batch:	280-62948	Lab File ID:	004F0401.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.5 g
Analysis Date:	04/21/2011 1046	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	04/19/2011 1135			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.7	U	2.7	9.8
Aroclor 1221	7.9	U	7.9	16
Aroclor 1232	2.0	U	2.0	9.8
Aroclor 1242	4.6	U	4.6	9.8
Aroclor 1248	4.6	U	4.6	9.8
Aroclor 1254	2.6	U	2.6	9.8
Aroclor 1260	2.6	U	2.6	9.8

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	101	59 - 130
Tetrachloro-m-xylene	97	53 - 128

Lab Control Sample - Batch: 280-62948**Method: 8082****Preparation: 3550C**

Lab Sample ID:	LCS 280-62948/2-A	Analysis Batch:	280-63634	Instrument ID:	GCS_W
Client Matrix:	Solid	Prep Batch:	280-62948	Lab File ID:	005F0501.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 g
Analysis Date:	04/21/2011 1118	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	04/19/2011 1135			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	33.0	33.8	102	54 - 132	
Aroclor 1260	33.0	35.0	106	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	96	59 - 130
Tetrachloro-m-xylene	91	53 - 128

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Matrix Spike/**Matrix Spike Duplicate Recovery Report - Batch: 280-62948****Method: 8082****Preparation: 3550C**

MS Lab Sample ID:	280-14601-5	Analysis Batch:	280-63634	Instrument ID:	GCS_W
Client Matrix:	Solid	Prep Batch:	280-62948	Lab File ID:	011F1101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	04/21/2011 1428			Final Weight/Volume:	5000 uL
Prep Date:	04/19/2011 1135			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-14601-5	Analysis Batch:	280-63634	Instrument ID:	GCS_W
Client Matrix:	Solid	Prep Batch:	280-62948	Lab File ID:	012F1201.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.6 g
Analysis Date:	04/21/2011 1500			Final Weight/Volume:	5000 uL
Prep Date:	04/19/2011 1135			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Aroclor 1016	557	619	54 - 132	9	26	N	N
Aroclor 1260	133	65	62 - 129	42	26	N	*
Surrogate							
Decachlorobiphenyl	MS % Rec		MSD % Rec		Acceptance Limits		
Tetrachloro-m-xylene	74		71		59 - 130		
	77		73		53 - 128		

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Method Blank - Batch: 280-62862

Method: NWTPH-Dx

Preparation: 3550C

Lab Sample ID:	MB 280-62862/1-A	Analysis Batch:	280-64316	Instrument ID:	GCS_U
Client Matrix:	Solid	Prep Batch:	280-62862	Lab File ID:	075B7501.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.9 g
Analysis Date:	04/24/2011 0039	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	04/18/2011 2240			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
C10-C36	940	U	940	3800
C10-C28	640	U	640	3800

Surrogate % Rec Acceptance Limits
o-Terphenyl 82 49 - 115

Lab Control Sample - Batch: 280-62862

Method: NWTPH-Dx

Preparation: 3550C

Lab Sample ID:	LCS 280-62862/2-A	Analysis Batch:	280-64316	Instrument ID:	GCS_U
Client Matrix:	Solid	Prep Batch:	280-62862	Lab File ID:	076B7601.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	04/24/2011 0107	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	04/18/2011 2240			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
C10-C36	66400	63200	95	57 - 115	
C10-C28	66400	63200	95	53 - 115	

Surrogate % Rec Acceptance Limits
o-Terphenyl 79 49 - 115

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Matrix Spike/**Matrix Spike Duplicate Recovery Report - Batch: 280-62862****Method: NWTPH-Dx****Preparation: 3550C**

MS Lab Sample ID:	280-14601-1	Analysis Batch:	280-64316	Instrument ID:	GCS_U
Client Matrix:	Solid	Prep Batch:	280-62862	Lab File ID:	078B7801.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.5 g
Analysis Date:	04/24/2011 0203			Final Weight/Volume:	1000 uL
Prep Date:	04/18/2011 2240			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-14601-1	Analysis Batch:	280-64316	Instrument ID:	GCS_U
Client Matrix:	Solid	Prep Batch:	280-62862	Lab File ID:	079B7901.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.8 g
Analysis Date:	04/24/2011 0231			Final Weight/Volume:	1000 uL
Prep Date:	04/18/2011 2240			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
C10-C36	88	88	57 - 115	4	23		
C10-C28	89	88	56 - 115	5	23		
Surrogate		MS % Rec		MSD % Rec		Acceptance Limits	
o-Terphenyl		77		74		49 - 115	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076**Method Blank - Batch: 280-62856****Method: 8310**
Preparation: 3550C

Lab Sample ID:	MB 280-62856/1-A	Analysis Batch:	280-63892	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-62856	Lab File ID:	G0425008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	04/25/2011 1248	Units:	ug/Kg	Final Weight/Volume:	4000 uL
Prep Date:	04/18/2011 2200			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Acenaphthene	9.9	U	9.9	99
Acenaphthylene	8.9	U	8.9	99
Anthracene	3.0	U	3.0	20
Benzo[a]anthracene	3.2	U	3.2	15
Benzo[a]pyrene	6.4	U	6.4	15
Benzo[b]fluoranthene	4.2	U	4.2	15
Benzo[g,h,i]perylene	7.2	U	7.2	30
Benzo[k]fluoranthene	3.9	U	3.9	15
Chrysene	4.8	U	4.8	40
Dibenzo(a,h)anthracene	11	U	11	30
Fluoranthene	13	U	13	40
Fluorene	5.2	U	5.2	30
Indeno[1,2,3-cd]pyrene	12	U	12	30
Naphthalene	12	U	12	99
Phenanthrene	12	U	12	40
Pyrene	12	U	12	40
Surrogate	% Rec		Acceptance Limits	
Terphenyl-d14 (SUR)	94		72 - 115	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Lab Control Sample - Batch: 280-62856**Method: 8310****Preparation: 3550C**

Lab Sample ID:	LCS 280-62856/2-A	Analysis Batch:	280-63892	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-62856	Lab File ID:	G0425009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.6 g
Analysis Date:	04/25/2011 1318	Units:	ug/Kg	Final Weight/Volume:	4000 uL
Prep Date:	04/18/2011 2200			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	1960	2000	102	72 - 115	
Acenaphthylene	1960	1830	93	60 - 115	
Anthracene	1960	1670	85	61 - 115	
Benzo[a]anthracene	1960	2070	106	76 - 115	
Benzo[a]pyrene	1960	1690	86	69 - 115	
Benzo[b]fluoranthene	1960	2010	103	81 - 115	
Benzo[g,h,i]perylene	1960	1950	99	71 - 115	
Benzo[k]fluoranthene	1960	1860	95	85 - 115	
Chrysene	1960	1930	99	70 - 115	
Dibenz(a,h)anthracene	1960	1930	98	79 - 115	
Fluoranthene	1960	1860	95	67 - 115	
Fluorene	1960	1840	94	72 - 115	
Indeno[1,2,3-cd]pyrene	1960	2080	106	76 - 115	
Naphthalene	1960	1890	96	77 - 115	
Phenanthrene	1960	1870	96	79 - 115	
Pyrene	1960	1860	95	77 - 115	
Surrogate		% Rec		Acceptance Limits	
Terphenyl-d14 (SUR)		96		72 - 115	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-62856**

**Method: 8310
Preparation: 3550C**

MS Lab Sample ID:	280-14601-1	Analysis Batch:	280-63892	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-62856	Lab File ID:	G0425011.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.5 g
Analysis Date:	04/25/2011 1419			Final Weight/Volume:	4000 uL
Prep Date:	04/18/2011 2200			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY
MSD Lab Sample ID:	280-14601-1	Analysis Batch:	280-63892	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-62856	Lab File ID:	G0425012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	32.9 g
Analysis Date:	04/25/2011 1450			Final Weight/Volume:	4000 uL
Prep Date:	04/18/2011 2200			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Acenaphthene	101	103	72 - 115	6	20		
Acenaphthylene	92	92	60 - 115	7	21		
Anthracene	85	85	61 - 115	8	20		
Benzo[a]anthracene	102	104	76 - 115	6	20		
Benzo[a]pyrene	86	86	69 - 115	7	20		
Benzo[b]fluoranthene	98	101	81 - 115	4	20		
Benzo[g,h,i]perylene	98	98	71 - 115	7	20		
Benzo[k]fluoranthene	92	93	85 - 115	6	20		
Chrysene	94	96	70 - 115	5	20		
Dibeno(a,h)anthracene	96	97	79 - 115	7	20		
Fluoranthene	94	94	67 - 115	7	20		
Fluorene	92	93	72 - 115	7	20		
Indeno[1,2,3-cd]pyrene	104	104	76 - 115	7	20		
Naphthalene	94	96	77 - 115	6	20		
Phenanthrene	94	95	79 - 115	7	20		
Pyrene	94	94	77 - 115	7	20		
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
Terphenyl-d14 (SUR)	92		93		72 - 115		

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Method Blank - Batch: 280-62837

Method: 6010B

Preparation: 3050B

Lab Sample ID:	MB 280-62837/1-A	Analysis Batch:	280-63593	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-62837	Lab File ID:	26b042111.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/22/2011 0158	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	0.66	U	0.66	1.0
Barium	0.076	U	0.076	0.50
Beryllium	0.033	U	0.033	0.20
Boron	0.98	U	0.98	2.0
Calcium	20.79	B	14.1	50.0
Copper	0.22	U	0.22	1.0
Lead	0.27	U	0.27	0.50
Molybdenum	0.26	U	0.26	2.0
Nickel	0.212	B	0.12	4.0
Selenium	0.86	U	0.86	1.0
Silicon	6.06	B	5.7	10.0
Vanadium	0.094	U	0.094	2.0
Zinc	0.482	B	0.40	1.0

Method Blank - Batch: 280-62837

Method: 6010B

Preparation: 3050B

Lab Sample ID:	MB 280-62837/1-A	Analysis Batch:	280-63885	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-62837	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/22/2011 1334	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	14.91		1.6	5.0
Antimony	0.38	U	0.38	0.60
Cobalt	0.10	U	0.10	1.0
Iron	27.36		3.8	5.0
Magnesium	23.86		3.7	20.0
Manganese	0.367	B	0.10	1.0
Potassium	41.0	U	41.0	300
Silver	0.16	U	0.16	0.20
Sodium	59.0	U	59.0	120

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Lab Control Sample - Batch: 280-62837

Method: 6010B

Preparation: 3050B

Lab Sample ID:	LCS 280-62837/2-A	Analysis Batch:	280-63593	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-62837	Lab File ID:	26b042111.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/22/2011 0201	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	100	91.81	92	85 - 110	
Barium	200	202.8	101	87 - 112	
Beryllium	5.00	4.70	94	84 - 114	
Boron	100	83.59	84	81 - 110	
Calcium	5000	4562	91	82 - 114	
Chromium	20.0	19.03	95	84 - 114	
Copper	25.0	22.31	89	88 - 110	
Lead	50.0	46.25	92	86 - 110	
Molybdenum	100	93.44	93	86 - 110	
Nickel	50.0	44.11	88	87 - 110	
Selenium	200	179.4	90	83 - 110	
Silicon	1000	235.1	24	10 - 70	
Vanadium	50.0	43.78	88	88 - 110	
Zinc	50.0	41.73	83	76 - 114	

Lab Control Sample - Batch: 280-62837

Method: 6010B

Preparation: 3050B

Lab Sample ID:	LCS 280-62837/2-A	Analysis Batch:	280-63885	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-62837	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/22/2011 1337	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	174.6	87	82 - 116	
Antimony	50.0	43.36	87	82 - 110	
Cobalt	50.0	44.32	89	87 - 110	
Iron	100	97.18	97	87 - 120	
Magnesium	5000	4669	93	90 - 110	
Manganese	50.0	47.18	94	88 - 110	
Potassium	5000	4685	94	89 - 110	
Silver	5.00	4.49	90	87 - 114	
Sodium	5000	4785	96	90 - 112	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Matrix Spike - Batch: 280-62837**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	280-14601-1	Analysis Batch:	280-63593	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-62837	Lab File ID:	26b042111.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.06 g
Analysis Date:	04/22/2011 0208	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	2.6	95.7	83.50	85	76 - 111	
Barium	46.0	191	228.1	95	52 - 159	
Beryllium	0.032	U	4.08	85	72 - 105	
Boron	2.4	95.7	72.01	73	75 - 107	N
Calcium	10800	4790	15270	93	43 - 165	
Chromium	10.7	19.1	28.31	92	70 - 200	
Copper	18.4	23.9	38.59	84	37 - 187	
Lead	5.5	47.9	45.20	83	70 - 200	
Molybdenum	0.49	B	80.13	83	75 - 103	
Nickel	10.6	47.9	48.73	80	61 - 126	
Selenium	0.83	U	157.8	82	76 - 104	
Silicon	203	957	432.4	24	20 - 200	
Vanadium	41.5	47.9	85.81	93	50 - 169	
Zinc	55.3	47.9	90.30	73	70 - 200	

Matrix Spike - Batch: 280-62837**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	280-14601-1	Analysis Batch:	280-63885	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-62837	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.06 g
Analysis Date:	04/22/2011 1343	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	5800	191	7080	668	50 - 200	4
Antimony	0.37	U	24.14	50	20 - 200	
Cobalt	5.9	47.9	42.94	77	72 - 106	
Iron	16500	95.7	16670	167	70 - 200	4
Magnesium	4320	4790	8288	83	64 - 145	
Manganese	251	47.9	296.0	94	40 - 200	4
Potassium	986	4790	5079	85	56 - 172	
Silver	0.39	4.79	3.98	75	75 - 141	
Sodium	318	4790	4611	90	78 - 111	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Duplicate - Batch: 280-62837**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	280-14601-1	Analysis Batch:	280-63593	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-62837	Lab File ID:	26b042111.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.08 g
Analysis Date:	04/22/2011 0210	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Arsenic	2.6	2.43	6	30	
Barium	46.0	52.73	14	30	
Beryllium	0.032	U	0.031	NC	30
Boron	2.4	1.45	48	30	B M
Calcium	10800	10920	0.9	30	
Chromium	10.7	12.16	13	40	
Copper	18.4	20.83	12	30	
Lead	5.5	9.73	56	40	M
Molybdenum	0.49	B	0.520	5	30
Nickel	10.6	10.68	0.3	30	
Selenium	0.83	U	0.977	NC	30
Silicon	203	200.3	1	40	
Vanadium	41.5	39.64	5	30	
Zinc	55.3	55.46	0.4	40	

Duplicate - Batch: 280-62837**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	280-14601-1	Analysis Batch:	280-63885	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-62837	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.08 g
Analysis Date:	04/22/2011 1346	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/21/2011 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Aluminum	5800	5704	2	40	
Antimony	0.37	U	0.411	NC	40
Cobalt	5.9	5.62	6	30	
Iron	16500	15260	8	40	
Magnesium	4320	4240	2	30	
Manganese	251	252.2	0.6	40	
Potassium	986	1062	7	40	
Silver	0.39	0.475	19	30	
Sodium	318	303.3	5	30	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076**Method Blank - Batch: 280-63915****Method: 6010B****Preparation: 3050B**

Lab Sample ID:	MB 280-63915/1-A	Analysis Batch:	280-64247	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-63915	Lab File ID:	25A4042611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/26/2011 2116	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/25/2011 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cadmium	0.041	U	0.041	0.20

Lab Control Sample - Batch: 280-63915**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	LCS 280-63915/2-A	Analysis Batch:	280-64247	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-63915	Lab File ID:	25A4042611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/26/2011 2119	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/25/2011 1430				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cadmium	10.0	10.27	103	87 - 110	

Matrix Spike - Batch: 280-63915**Method: 6010B****Preparation: 3050B**

Lab Sample ID:	280-14601-1	Analysis Batch:	280-64247	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-63915	Lab File ID:	25A4042611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.14 g
Analysis Date:	04/26/2011 2128	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/25/2011 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Cadmium	0.18	8.90	8.63	95	40 - 130	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Duplicate - Batch: 280-63915

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-14601-1	Analysis Batch:	280-64247	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-63915	Lab File ID:	25A4042611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.16 g
Analysis Date:	04/26/2011 2126	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/25/2011 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Cadmium	0.18	0.144	23	30	B

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076**Method Blank - Batch: 280-62351****Method: 7471A****Preparation: 7471A**

Lab Sample ID:	MB 280-62351/1-A	Analysis Batch:	280-62894	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-62351	Lab File ID:	110418AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/18/2011 1253	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/18/2011 0930				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-62351**Method: 7471A****Preparation: 7471A**

Lab Sample ID:	LCS 280-62351/2-A	Analysis Batch:	280-62894	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-62351	Lab File ID:	110418AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/18/2011 1255	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/18/2011 0930				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.398	95	87 - 111	

Matrix Spike - Batch: 280-62351**Method: 7471A****Preparation: 7471A**

Lab Sample ID:	280-14601-3	Analysis Batch:	280-62894	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-62351	Lab File ID:	110418AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.67 g
Analysis Date:	04/18/2011 1311	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/18/2011 0930				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0056 U	0.394	0.393	100	87 - 111	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1
Sdg Number: J01076

Duplicate - Batch: 280-62351

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-14601-3	Analysis Batch:	280-62894	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-62351	Lab File ID:	110418AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.67 g
Analysis Date:	04/18/2011 1309	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/18/2011 0930				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.0056 U	0.0052	NC	20	U

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14601-1

Sdg Number: J01076

Duplicate - Batch: 280-62407

Method: D-2216

Preparation: N/A

Lab Sample ID:	280-14601-1	Analysis Batch:	280-62407	Instrument ID:	No Equipment
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	04/15/2011 0928	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	1.5	1.4	0.6	20	

3.4.4.1

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST																																																																																																																																																																																																							
Collector BC Koelling	Company Contact Joan Kessner			Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 8L	Page <u>1</u> of <u>1</u>	Data Turnaround 21 Days																																																																																																																																																																																															
Project Description 100N Field Remediation - Soil In-Process	Sampling Location 128-N-1 Excavation			SAF No. RC-190																																																																																																																																																																																																			
Ice Chest No. <u>EL-96-51</u>	Field Logbook No. EL-1652-2			COA R128N12000	Method of Shipment <i>Fed Ex</i>																																																																																																																																																																																																		
Shipped To TestAmerica Incorporated, Richland, DeSoto, LA	Offsite Property No. <u>NA</u>			Bill of Lading/Air Bill No. <u>7969 8544 0747</u>																																																																																																																																																																																																			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>None</i>																																																																																																																																																																																																							
Special Handling and/or Storage <i>Cool 4 degrees C</i>																																																																																																																																																																																																							
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Analytical Due:
Report Due:

Sample Check-in List

Date/Time Received: 4/14/11 930 GM Screen Result 12 microR/hr

Client: Washington Closure Hanford SDG #: J0107U NA [] SAF #: RC-190 NA []

Job Number: 14601 Chain of Custody # RC-190-015

Shipping Container ID: ERC-94-511 Air Bill # 796985440574

1. Custody Seals on shipping container intact? NA [] Yes [] No []
2. Custody Seals dated and signed? NA [] Yes [] No []
3. Chain of Custody record present? NA [] Yes [] No []
4. Cooler Temperature °C: 3-4, 4.1 NA [] 5. Vermiculite/packing materials is NA [] Wet [] Dry []
6. Number of samples in shipping container: 5
7. Sample holding times exceeded? NA [] Yes [] No []
8. Samples have:
 - Tape
 - Custody Seals
 - Hazard Labels
 - Appropriate Sample Labels
9. Samples are:
 - In Good Condition
 - Broken
 - Leaking
 - Have Air Bubbles

(Only for samples requiring no head space.)
10. Sample pH taken? NA [] pH<2 [] pH>2 [] pH>9 [] Amount HNO₃ Added _____
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No []
13. Description of anomalies (include sample numbers): _____

Sample Custodian: BB Date: 4/14/11

<u>Client Sample ID</u>	<u>Analysis Requested</u>	<u>Condition</u>	<u>Comments/Action</u>

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager John Date 4/14/11

From: (509) 375-4840 Origin ID: PSCA
 WCH MAILROOM
 WASHINGTON CLOSURE HANFORD
 2620 FERMI AVE
 RICHLAND, WA 99354



Ship Date: 13APR11
 ActWgt: 70.0 LB
 CAD: 8897843/NET3130

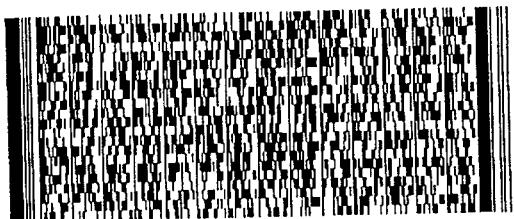
Delivery Address Bar Code



SHIP TO: (303) 736-0100
Sample Recieving
Test America Denver
4955 YARROW ST

BILL SENDER

ARVADA, CO 80002



Ref #
 Invoice #
 PO #
 Dept #

1 of 2

THU - 14 APR A1
 PRIORITY OVERNIGHT

TRK# 7969 8544 0574

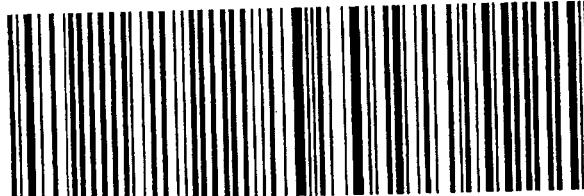
0201

MASTER

80002

CO-US

DEN

XH WHHA

50DG3/26A87/EFB

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2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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From: (509) 375-4640 Origin ID: PSCA
 WCH MAILROOM
 WASHINGTON CLOSURE HANFORD
 2620 FERMI AVE
 RICHLAND, WA 99354



Ship Date: 13APR11
 ActWgt 71.0 LB
 CAD: 8897843/INET3130

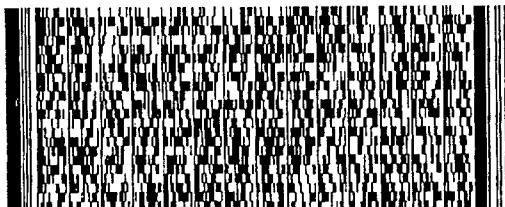
Delivery Address Bar Code



Ref #
 Invoice #
 PO #
 Dept #

SHIP TO: (303) 736-0100 BILL SENDER
Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002



2 of 2 THU - 14 APR A1
 PRIORITY OVERNIGHT

MPS# 7969 8544 0747

0263

Mstr# 7969 8544 0574

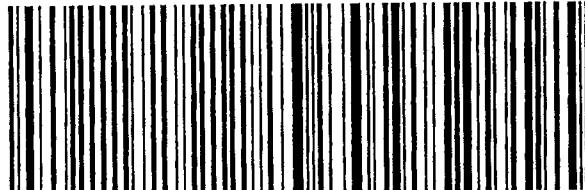
0201

80002

CO-US

DEN

XH WHHA



50DG3/26A8/7EFB

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